

BIGHORN NATIONAL FOREST

Final Environmental Impact Statement

for the

Revised Land and Resource Management Plan

Roadless Area Management

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Introduction

The purpose of this appendix is to describe roadless areas and the analysis factors used in evaluating individual roadless areas on the Bighorn National Forest. It includes a summary of each area's physical and biological attributes, resource uses, recreation opportunities, unique environmental features, and present management situation. A tabular display of effects of alternatives on individual roadless areas is included.

Background

Roadless Area Review and Evaluation

In 1970, the Forest Service studied all roadless and undeveloped areas in the National Forest System greater than 5,000 acres for the purpose of prioritizing areas with strong wilderness characteristics for further study. This study, known as the Roadless Area Review and Evaluation (RARE), was halted after a legal challenge.

In 1977, the Forest Service embarked on another nationwide Roadless Area Review and Evaluation (RARE II) to identify roadless and undeveloped areas that were suitable for inclusion in the National Wilderness Preservation System. RARE II resulted in roadless areas recommended for wilderness and proposed to Congress for legislative action. Areas not recommended for wilderness became available for multiple use activities other than wilderness. Approximately 689,770 acres or 62 percent of the Bighorn National Forest was classified as roadless in 1979 as part of the nation-wide RARE II process.

RARE II was also challenged in court on the basis of failure to fully comply with National Environmental Policy Act (NEPA) requirements.

In the late 1970's, the Bighorn National Forest began the development of a land and resource management plan for the Forest, which included an evaluation of roadless areas. Volume II-Appendix M of the Draft Environmental Impact Statement for the Forest Plan containing roadless area information was completed and released to the public on August 8, 1984.

Congress passed the Wyoming Wilderness Act of October 30, 1984 (P.L. 98-550), designating the 189,039-acre Cloud Peak Wilderness. The Cloud Peak Wilderness included the Cloud Peak Primitive Area, the Seven Brothers RARE II area and some

additional acreage contiguous with the primitive area. The Act also released all remaining (non-wilderness) RARE II areas for multiple use management.

The Final Environmental Impact Statement and Forest Plan were completed and released with a Record of Decision dated October 4, 1985. The Wyoming Wilderness Act was recognized in the final Forest Plan and all roadless areas outside of Cloud Peak Wilderness were allocated for non-wilderness management areas. Of the 623,014 roadless acres allocated for multiple uses, about 587,000 acres were included in management areas allowing road construction and reconstruction, and about 34,000 acres were included in management areas that did not allow road construction and reconstruction. No areas were recommended for wilderness designation under the 1985 plan.

In 2000, the Bighorn National Forest began the process of revising its 1985 Forest Plan. For the Forest Plan revision process, a new inventory was required to evaluate roadless areas and their wilderness potential. A 2003 roadless area inventory was completed and released in the DEIS. In response to issues raised by the public, a 2005 roadless inventory was conducted and this Appendix describes the results of that inventory and wilderness evaluation.

Criteria

Forest Service Handbook (FSH) 1909.12 establishes the inventory criteria for roadless areas and their evaluation for wilderness. The handbook specifies that roadless areas be evaluated on the basis of the area's capability for wilderness designation, availability for wilderness designation, and the need for wilderness designation.

Wilderness Capability

Capability is the degree to which the area contains the basic characteristics that make it suitable for wilderness designation, without regard to its availability. Rating characteristics were developed from FSH 1909.12, Chapter 7.

Areas were rated for their ability to provide solitude, adventure and challenge, primitive recreation, environmental and special features, and the ability to manage the area as wilderness.

Availability for Wilderness

Only those areas determined to be capable for wilderness are considered for their availability for wilderness (FSH 1909.12, 7.22).

Availability is determined by considering the value of and need for the wilderness resource compared to the value of and need for other resources. To be available for wilderness, the values of the wilderness resource, both tangible and intangible, should offset the value of resources that formal wilderness designation would forego.

The following table lists all the Roadless Areas and displays their capability and availability.

Table C-1. Inventoried Roadless Areas on the Bighorn National Forest.

	Area Number	Area Name	Acres	Capability	Availability
1.	B020	Little Bighorn	80,132	Capable	Available
2.	B021	Devil's Canyon	14,204	Capable	Available
3.	B023	Walker Prairie	49,533	Capable	Available
4.	B025	Hideout Creek	9,285	Not Capable	Not Available
5.	B026	Bear Rocks	24,994	Not Capable	Not Available
6.	B027	Horse Creek Mesa	41,682	Capable	Available
7.	B029	Piney Creek	22,932	Capable	Not Available
8.	B030	Little Goose	24,848	Capable	Not Available
9.	B031	Cld Pk Contig North	17,425	Capable	Not Available
10.	B032	Rock Creek	47,648	Capable	Available
11.	B033	Grommund Creek	6,192	Capable	Not Available
12.	B036	Hazeltown Pks	8,975	Not Capable	Not Available
13.	B037	Leigh Creek	6,700	Not Capable	Not Available
14.	B041	Cld Pk Contig West	45,245	Capable	Not Available
15.	B042	Medicine Ldg	7,572	Capable	Available
16.	B043	Tongue River	17,297	Capable	Not Available
17.	B044	Lodge Grass	11,935	Capable	Available
18.	B045	Cookstove Basin	7,274	Not Capable	Not Available
19.	B046	Pete's Hole	20,302	Capable	Available
20.	B048	Cld Pk Contig South	22,068	Not Capable	Not Available
21.	B052	Adelaide	2,023	Capable	Not Available
22.	B053	Mud Lake	112	Capable	Not Available
23.	B054	Cld Pk Contig East	383	Capable	Not Available
24.	B056	Cld Pk Contig East	2,668	Capable	Not Available
25.	B057	Cld Pk Contig East	3,274	Capable	Not Available
Total Acres			494,703		

Source: GIS (ArcInfo), 2005 roadless area inventory

Need for Wilderness

Roadless areas determined to be both capable and available for wilderness are evaluated for the need for wilderness.

For an area to be recommended for inclusion in the National Wilderness Preservation System there should be clear evidence of current or future public need for additional

designated wilderness.

Relation to nearby Wilderness Areas and Urban Areas

The Bighorn National Forest manages one wilderness area, the Cloud Peak Wilderness, with a total of 189,039 acres. There are over 4 million acres of designated wilderness in the state of Wyoming, with over 90% of the acres concentrated in the northwest quadrant of the state.

The Bighorn National Forest is located in one of the least populous areas of the country. In the four-county area surrounding the Forest only Sheridan County has a significantly larger population today than it did in 1985. The region surrounding the Big Horn Mountains includes northern Wyoming, southeastern Montana and the Black Hills of Wyoming and South Dakota. The largest population centers are the small cities of Billings, Casper and Rapid City. The following table summarizes the wilderness opportunities available from these population centers.

Table C-2. Acres of Wilderness Accessible from the Nearest Cities.

City and State	2000 Population	Wilderness Acres within 250 miles	Wilderness Acres within 400 miles
Billings, MT	89,847	4,740,581	11,546,244
Casper, WY	49,644	4,779,192	8,463,466
Rapid City, SD	59,607	326,424	5,818,965

Population growth between the 1990 and 2000 census numbers ranged from 6.2% for Casper to 10.7% for Billings. Rapid City grew at a 9.3% rate. The smaller number of wilderness acres accessible from Rapid City indicates the decline in wilderness opportunity as one travels east from the Rocky Mountains.

It is approximately 134 miles from Casper and 229 miles from Rapid City to the Circle Park Trailhead access to Cloud Peak Wilderness. It is approximately 158 miles from Billings to the Coffeen Park Trailhead access to Cloud Peak Wilderness.

Visitor Use in Existing Wilderness

Approximately one half of the visitors to the Cloud Peak Wilderness are from outside Wyoming. The majority of these live in the upper mid-western states of Minnesota, Wisconsin, Iowa, and South Dakota.

Recreation visitor day (RVD) use since 1993 is shown in the following table. An RVD is defined as any recreational use of the forest that results in 12 visitor hours. The RVD numbers reflect Cloud Peak registration data, which includes “number of people in party” and “length of stay” data. Based on forest experience, registration compliance levels are very high (at or exceeding 95%). Annual Wilderness use has averaged about 63,000 RVD’s. There is a declining trend in the past four years. Over the past 12 years the RVD trend is a decline of 1.3% per year. Many variables influence use in a particular year or set of years. Local weather and a variety of socioeconomic conditions are among the influences on a decision to visit the wilderness.

Table C-3. Cloud Peak Wilderness use measured in Recreation Visitor Days (RVDs).

Year	Bighorn National Forest –Cloud Peak Wilderness RVDs (thousand)
1995	55
1996	67
1997	54
1998	61
1999	65
2000	71
2001	70
2002	63
2003	55
2004	48

There is a limited season of use in the Cloud Peak Wilderness due to its high altitude. The addition of a lower elevation ecosystem wilderness would offer opportunities for an extended season of use.

Unconfined Outdoor Recreation

Table C-4. Inventoried Opportunities for Unconfined Outdoor Recreation on the Bighorn National Forest.

Recreation Opportunity	Acres	% of Forest
Primitive	181,232	16%
Semi-Primitive Non-Motorized	278,108	20%
Semi-Primitive Motorized	372,549	33%

The Bureau of Land Management administers large, lower-elevation areas open for public recreation in the Bighorn Basin to the west of the forest. There are fewer acres of BLM lands on the east side of the forest.

Wildlife Needs

Some species may be more strongly associated with wilderness areas as they may benefit from reduced human disturbance and the higher level of natural processes that shape vegetation patterns typically found in the wilderness. For other species, the limitations on habitat manipulation that results from wilderness designation may be detrimental.

The evaluation factors for this assessment are listed in the Forest Service Handbook

(FSH) 1909.12, 7.23b. The evaluation factors used for this assessment are as follows, and are applied to those areas found both capable and available for wilderness designation:

- ✧ The ability of certain biotic species to compete with increased public use and developmental projects that affect their habitats. Consider means available, other than wilderness designation for meeting this need.
- ✧ The need to provide a sanctuary for those biotic species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific values or phenomena.

Two levels of assessment are appropriate for this purpose. One level is at the species-specific level, and the other at the ecological community level. These two levels match the process for which viability will be assessed for the overall plan revision. For the species-specific approach, a database inquiry of the known rare species listed in the Wyoming Natural Diversity Database was made. No species were detected that could not compete with increasing public use and developmental projects that affect their habitats. Species habitat needs could be met through management emphasis or prescriptions other than wilderness, as demonstrated by species' occurrences outside of existing wilderness or similarly protected areas. The habitat for species occurs regardless of management designation, and there are not currently any projected levels of commodity output or other development on the Forest that would permanently remove habitat for any of these species. Increases in public use of the Forest are anticipated, particularly in the recreation realm, however this increase is likely to occur in both wilderness and non-wilderness areas.

The loss of wolves, grizzly, and the lynx from the Forest would be the most useful consideration of specific species, since these are currently the only likely extirpated species. With regard to the grizzly, no analysis is necessary, as the species will not be managed on the Bighorn National Forest, as stated in the Bear Management Plan completed by the Wyoming Game and Fish Department in 2002. With regard to wolves, they are a generalist species that utilize habitats in many areas outside of existing wilderness. It is anticipated that wolves will reestablish on the Big Horn Mountains in the next decade or two, however, they are not known to require wilderness and their most significant mortality factor is shooting. Studies have not been conclusive on the reasons for lynx decline, but it is believed to be linked to shooting, trapping, competition from other predators, and habitat issues associated with prey. This species also persists outside of wilderness areas on other national forests, indicating some level of adaptability. The common mortality factor for these three species is the movement barrier created by developed highways and the associated motor vehicle mortality. There are no plans for additional highways on the Bighorn National Forest within the next planning period that wilderness designation would preclude.

The wolverine could also be considered. Alpine tundra typically found in most

wilderness areas may more closely match their habitat in northern latitudes, where they are tied to migrating caribou herds. Wilderness has not been shown to be necessary for the wolverine's habitat, but there are associations with less human interaction for the species. Wolverines have been sighted on the Forest; in areas surrounding the Forest; in the Cloud Peak Wilderness; and, on the plains, indicating their ability or preference for long-range movements.

Finally, species that may be significant genetically to the Big Horn Mountains were considered. These would include the pika, snowshoe hare, water vole, red-backed vole, and the marten. There are likely many other species possible in this category due to the island geography of the Big Horns. None of these species are known to be associated only with wilderness areas or the additional management restrictions associated with them. Management through designations other than wilderness, and appropriate standards and guidelines, are capable of ensuring management for these species. For other specific species considered, refer to the Species Emphasis Categories document in the project record.

For the ecological community level of analysis, the wilderness capability assessments already addressed the inclusion of any biological sites listed in the Wyoming Natural Diversity Database's (WYNDD) Fine Filter Assessment prepared for the Bighorn National Forest (Welp et al, 2000). There was further evaluation of any rare or intact ecological communities conducted in the Research Natural Area evaluations. RNAs can be managed as such, and are not dependent on wilderness designation for management. Similarly, biological sites identified by WYNDD are also not dependent on wilderness designation, as other management prescriptions can provide adequate protection with management standards and guidelines.

Based on the two evaluation criteria stated above, none of the wildlife species or the ecological systems on the Bighorn National Forest require wilderness to provide necessary habitat or protection. This is evidenced by species' occurrences outside of existing wilderness areas, through the ability of standards and guidelines or management emphasis to provide protection, and through the lack of a reasonable foreseeable developmental threat on the Forest that could impact the species.

In the case of rare plants, wilderness designation does not provide a higher level of protection for rare plant species than other management prescriptions afford. There are no species identified on the Bighorn National Forest for which non-motorized management provides additional viability assurance.

Ecosystems Represented

Based on analysis done at the Regional level, certain cover types have been identified as having only limited representation in the Rocky Mountain Region's wilderness system. The spruce/fir and alpine (grass/forb) cover types are the most represented vegetation type in the Rocky Mountain Region. These cover types and their acreages in the Cloud Peak Wilderness are listed in the following table.

Table C-5. Cover types with limited representation in the Rocky Mountain Region wilderness system.

Cover Type	Acres in Cloud Peak Wilderness	Acres in Capable/Available Bighorn NF Roadless Areas
Ponderosa pine	-	8,733
Douglas fir	23	66,288
Lodgepole pine	26,736	68,696
Big sagebrush	177	14,827
Pinyon-juniper	-	1,807
Aspen	404	3,393
Grass types	14,062	22,241
Limber pine	-	10,305
Cottonwood/willow	-	118

Public Attitudes related to the Bighorn National Forest

A number of conservation groups have expressed support for roadless area conservation and wilderness recommendation. The Citizen's Conservation Alternative, a diverse working group of environmental organizations, supports wilderness recommendation for Little Bighorn, Devil's Canyon, Rock Creek, and Walker Prairie Roadless Areas (and several others). The HF Bar Ranch, a privately owned guest ranch located adjacent to the Forest, strongly advocates wilderness recommendation for the Rock Creek Roadless Area.

In conjunction with Forest Plan revision, the University of Wyoming conducted a social assessment, which included a survey of 1,250 randomly selected residents of a four county area (Blevins, Audie and Jensen, Katherine, 2002, Social Assessment of a Four County Area, University of Wyoming unpublished report). When asked to choose from a list of 14 "future desired conditions", the condition that received the least support was "set aside more land for wilderness".

Cooperators on the Steering Committee for Plan Revision represented varied views on protection of roadless areas and wilderness recommendations. Protection of some areas with roadless qualities was generally supported. Some support for wilderness recommendations was evident from Sheridan County representatives. Opposition was evident from the other counties (Washakie, Big Horn and Johnson), particularly those on the west side of the Forest.

Social Considerations at a National Scale

Cordell and Teasley (1997) estimate in the 1994-1995 National Survey on Recreation and the Environment that there were 40.4 million visits to Wilderness in 1995. Visitor use of wilderness areas on National Forest System is forecasted to grow between 0.5 percent and 1.0 percent annually for the next 50 years.

The intensity of use - usually expressed as recreation visitor days (RVD's) per acre - is another indicator of wilderness use. By accounting for increased acreage, this measure

modifies changes in observed use resulting from new additions to the National Wilderness Preservation System. The intensity of overall Forest Service wilderness use has been fairly constant when observed between 1971 and 1993 (Loomis, 1999).

Growth projections by Cordell and Teasley (1997) for activities that commonly occur in wilderness estimate that backpacking is expected to increase 155% by 2040, day hiking by 193%, and wildlife observation and photography by 74%. Demand for increased wilderness recreation opportunities, as well as developed recreation opportunities, on a regional and national level appears likely.

On a national level, the location of wilderness is distributed unevenly across the nation in terms of population. The majority of federal lands are located in the western states and Alaska. While these states account for only about 20% of the nation's population, they hold more than 95% of the wilderness areas.

The national scoping conducted during development of the Roadless Area Conservation Rule identified strong support for protection of undeveloped forest areas at the national scale.

Environmental Effects

The potential environmental consequences and cumulative effects of assigning recommended wilderness and non-wilderness management areas to the inventoried roadless acres are described in Roadless section of FEIS Chapter 3. Tables found in this section display the acres assigned to recommended wilderness and non-wilderness management areas.

Individual Roadless Area Summaries

The following summaries include information on the wilderness evaluation criteria for each individual roadless area. The allocation of the acres in each individual roadless area to management areas is displayed. The estimated effects of management area allocations over the next planning period are displayed for each individual roadless area. The next planning period is defined as 15 years from this writing or the year 2020. The Roadless section of Chapter 3 includes an explanation of the method used for estimating effects.

Roadless Area B020 – Little Bighorn

Acres	80,132
Ranger District	Tongue and Medicine Wheel/Paintrock
History	Originally part of the #02020 Little Bighorn Roadless Area (134,760 acres) as identified in RARE II analysis.
Location	Located in the extreme northeast corner of the Bighorn National Forest. Motorized access via US Highways 14 and 14A, the Burgess Road (FR 532), Fool Creek Basin Road (FR 528), and the Sheep Mountain Road (FR 500). Numerous trails access the area including Bull Elk Park Trail (FT 076), Pumpkin Creek Trail (FT 146), Little Horn Trail (FT 050), and Dry Fork Ridge Trail (FT 004).
Surroundings	The Wyoming-Montana state line forms the north boundary, the Forest boundary runs along the eastern edge of the unit, and the south and west boundaries follow roads, timber harvests, and other non-compatible uses. The Crow Indian Reservation is adjacent to the area's north boundary.
Physical and biological description	<p>The Little Bighorn River rises in the slopes northeast of Bald Mountain and rapidly gains volume from its many tributaries as it flows northeastward through a deep canyon, which ends near the Wyoming-Montana border. The terrain and topography within and adjacent to the Little Bighorn River and its tributaries is varied. Elevations range from 4,600 feet where the Little Bighorn River exits the National Forest, to 9,500 feet atop Boyd Ridge. Sheer canyon walls featuring Bighorn and Madison limestones rise to approximately 1,000 feet along the riverbanks. The terrain along the river corridor becomes gentler, and the lower cliffs are interspersed with small river gorges upstream of the confluence of Wagon Box Creek and the Little Bighorn River. The topography of the Dry Fork portion of the area is similar to that of the Little Bighorn Canyon, but is broader with wide, flat benches below steep canyon walls to the east, and steep timbered slopes to the west.</p> <p>The unit is predominantly montane, with large areas of Douglas fir-mountain ninebark mixed with limber and lodgepole pines, and Engelmann spruce-subalpine fir stands on north aspects at the higher elevations. Open parks of sagebrush, Idaho fescue and bluebunch wheatgrass are scattered throughout the unit.</p>
Features	Dominant features in this unit are the rugged and scenic canyon country of Little Bighorn Canyon and Dry Fork. Numerous trails are distributed throughout the area and primitive recreation opportunities abound. The Little Bighorn River and Dry Fork offer excellent fishing. A Wild and Scenic River recommendation for approximately 19 miles of the Little Bighorn River was submitted in 1990, however Congress has not acted on this recommendation.

Resources Uses

Vegetation

Predominantly forested with 36% Douglas fir, 23% spruce-fir, 8% limber pine, 5% lodgepole pine, 14% grass/forb, 4% ponderosa pine, and the remainder is non-vegetated. Areas that were burned in the Pumpkin Creek fire (1970) have been planted and seeded with Engelmann spruce to supplement natural regeneration in the burned areas.

Several species of sensitive plants including Cary beardtongue (*Penstemon caryi*), Howard forget-me-not (*Eritrichum howardii*), and large yellow lady's slipper (*Cypripedium calceolus* var *pubescens*) are located in the area. Several of these sensitive species populations are located in three of the Forest's "biological areas" known as Mann Creek, Boyd Ridge, and Dry Fork. These areas have been identified by the Wyoming Natural Diversity Database (WYNDD) for their important concentrations of rare taxa and representative vegetation communities. Exotic species are common in the riparian zones and mesic shrublands, and along trails in the area. Cheatgrass, Kentucky bluegrass, meadow timothy, smooth brome, and Canada thistle are some of the exotic plants found here.

The Bull Elk Park Research Natural Area is located within the unit and features a disjunct region of Palouse Prairie Climax – *Agropyron-Festuca* association.

Recreation

The majority of recreational use is light and involves hiking, horseback riding, fishing, and hunting activities. The Little Horn Trail (FT 050) and Dry Fork Ridge Trail (FT 004) are popular routes for hikers and backpackers who want to experience the remote and scenic canyon environment of the Big Horn Mountains. The Freeze Out Trail (FT 008) and the Boyd Ridge Trail (FT 096) are authorized for motorized use. A portion of the Dry Fork Road has recently been converted to a motorized trail.

Big game hunting pressure in the fall is moderate to heavy near primary access roads such as Boyd Ridge, Dry Fork, and Freeze Out Cow Camp, but decreases as one moves away from roads and into the remote interior. There are numerous outfitter/guide permits authorized for summer recreation and fall hunting. One permit holder conducts a guided cattle drive when livestock are turned on to the allotment for the grazing season. Three recreation residence permits are authorized just outside the Forest boundary on the Little Bighorn River. Other special uses include the Bighorn Wild and Scenic Run- a competitive trail run that includes the Little Horn (FT 050) and Dry Fork (FT 004) trails. The annual 2-day event takes place in June and features 30 kilometer, 50 kilometer, 50 mile, and 100 mile events that traverse other roads and trails on the Forest. The Recreation Opportunity Spectrum (ROS) rating includes a majority of Semi-primitive Non-motorized areas, with some Primitive recreation also. The Little Bighorn and Dry Fork areas represent some of the largest areas of primitive recreation opportunities on the Forest.

Wildlife

Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots,

ROADLESS AREA MANAGEMENT

beaver, ground squirrels, and grouse also inhabit the area. The river corridors provide important habitat for many terrestrial and aquatic wildlife species. The riparian areas serve as feeding and nesting sites for birds and canyon walls offer potential nesting habitat for peregrine falcons. The area provides spring calving, summer, fall, and critical winter habitat for elk and deer, and is used as a migratory route into the adjoining Kerns Big Game Winter Range (State of Wyoming unit). A variety of trout are found in the Little Bighorn and Dry Fork rivers including rainbow trout, brook trout, and Yellowstone cutthroat trout. The Little Bighorn River is located within the Yellowstone River basin and part of the historic range for the Yellowstone cutthroat. Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*), a Forest sensitive species, have been sampled in Mann Creek and subsequent DNA testing revealed the sample to be genetically pure.

The water vole (*Microtus richardsoni*), another Forest sensitive species, has been trapped along Duncum Creek. The western portion of this roadless area falls within two lynx analysis units – Porcupine/Mann Creek and Little Bighorn/Dry Fork. The Canada lynx (*Lynx canadensis*) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act; however, the presence of lynx has not been documented on the Forest.

Range	Numerous active cattle and horse allotments are established in the area and typical range improvements such as fences, water developments, and cow camps can be found there.
Water	Little Bighorn River, Dry Fork, Mann Creek, and Pumpkin Creek are some of the principal streams in the unit that drain the area into the Upper Little Bighorn River watershed. The Dry Fork had formerly been proposed as a site for a pumped-storage hydroelectric dam, but there is currently no FERC application.
Minerals	Historic placer mining occurred along the Little Bighorn River in the early 1900s, but no significant production resulted from this activity. There are currently no active mining, oil and gas leasing, or mineral claims in this unit. There are no withdrawals and the area is considered to have low mineral and no oil/gas potential.
Heritage resources	There is a ceremonial site within the area and a prehistoric/historic travel route adjacent to the area. The presence of a nearby heritage travel corridor is an indicator of high potential for other eligible heritage resources in the area.
Fire	<p>Fire has been active in this landscape over the long term. In the past decade, there has been frequent fire activity in the roadless area including the 7,400 acre Little Horn Fire, the West Pass Fire, and the Intermission Fire.</p> <p>Fires in the Douglas fir cover type typically burn with mixed severity, but have the potential to become large fires, particularly if strong winds are present.</p>

Other

The eastern boundary has private, Wyoming State and Bureau of Land Management land adjoining the area. Kerns Big Game Winter Range, administered by the State of Wyoming, borders the unit in the northeast corner of the area.

The Bull Elk Park Research Natural Area (728 acres) is located within the unit and features a disjunct region of Palouse Prairie Climax – *Agropyron-Festuca* association. Mann Creek is a proposed Research Natural Area in the unit that contains genetically pure Yellowstone cutthroat trout and several sensitive species of plants.

Capability Assessment

(All ratings are high, medium, low or n/a – not applicable)

Primary Elements

Opportunity for solitude high

Excellent solitude opportunities are provided yearlong. Activity increases during hunting season along roads that extend into the interior of the area. Wild river recommendation describes a core area of solitude.

Natural and free from disturbance high

Much of the area is remote and possesses a high degree of naturalness. There are several roads with cow camps extending into the interior of the area that can impact solitude and disturbance. Travel on several motorized trails in the area causes disturbance.

Challenge high

The area is rugged with large, rarely accessed areas and broken up by steep, deeply incised, dark canyons.

Primitive and unconfined recreation med

Backcountry recreation is generally high –fishing, hiking trails, camping, and hunting opportunities are considered excellent. The Little Bighorn and Dry Fork areas are some of the largest areas on the Forest for primitive recreation. An annual competitive trail run is a non-conforming use in the core of the area.

Environmental and special features high

This area offers a high degree of opportunity for outdoor education and environmental study. The Bull Elk Park RNA provides a scientific study opportunity. Mann Creek is a proposed Research Natural Area that contains genetically pure Yellowstone cutthroat trout and high quality occurrences of sensitive plants. The area is frequently accessed by Crow Indians. The scenic features of the area are considered outstanding due to the extensive views, plant types, moss communities, and the sedimentary geology featuring limestone and dolomite canyons. The river corridors are inhabited by a wide variety of terrestrial and aquatic wildlife species.

ROADLESS AREA MANAGEMENT

Manageability med

Manageability of boundaries is moderate. The area features a large core, but there is a very long, complex boundary on the south and west sides. Motorized trails are present. Limited conflicts may occur at the mouth of the Little Bighorn Canyon where an easement exists across private land.

Conclusion – The high degree of solitude and naturalness combined with its large size and unique environmental features make the core area of this roadless area **Capable** for wilderness and it will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? Yes
An annual competitive trail run is a non-conforming use in the area.
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? No

Conclusion: Based on the resource potentials and management considerations described above, this area has been determined to be **Available** for wilderness.

Need Determination

Nearby Wilderness: The roadless area lies approximately 18 miles from the Cloud Peak Wilderness. An additional 4 million acres of wilderness occurs in the state of Wyoming.

Wildlife Needs: The area contains WYNDD records for genetically pure Yellowstone cutthroat trout, the water vole, and three sensitive plants. No species have been identified in the Little Bighorn area that require a wilderness environment for survival.

Areas of Biological Interest: Several species of sensitive plants including Cary beardtongue (*Penstemon caryi*), Howard forget-me-not (*Eritrichum howardii*), and large yellow lady's slipper (*Cypripedium calceolus* var *pubescens*) are located in the roadless area. Several of these sensitive species populations are located in three of the Forest's "biological areas" known as Mann Creek, Boyd Ridge, and Dry Fork. These areas have been identified by the WYNDD as biological areas for their important concentrations of rare taxa and representative vegetation communities. All three areas are ranked by WYNDD as B3: high significance areas.

Cover Type and Landforms: In comparison of the occurrence of various ecosystem types in nearby wilderness areas, the alpine and subalpine ecosystem types are well represented. Little Bighorn Roadless Area consists of lower elevation ecosystems that feature rivers cutting through colorful limestone canyons and Douglas fir forests. This lower elevation ecosystem is not currently well-represented in the Wyoming wilderness system.

The following table displays percentage of the cover types represented in this roadless area.

Table C-6. Percent of cover types in the Little Bighorn Roadless Area.

Cover Type	Acres	Percent
Forb	3,791	5
Grass	7,536	9
Bare	82	-
Rock	3,455	4
Shrub	1,077	1
Sagebrush	2,990	4
Willow	62	-
Aspen	1,098	1
Cottonwood/willow	-	-
Douglas fir	28,167	36
Limber pine	6,231	8
Lodgepole pine	4,223	5
Ponderosa pine	3,070	4
Pinyon-juniper	-	-
Spruce-fir	18,350	23

Limited Representation Cover Types: Certain cover types identified above have limited representation in the Rocky Mountain Region wilderness system. The following table identifies those limited cover types in the Little Bighorn Area and shows the percentage of total capable/available roadless it represents on the Bighorn National Forest.

Table C-7. Limited representation cover types in the Little Bighorn Roadless Area.

Cover Type	Acres in Little Bighorn Roadless Area	Percent of Total Bighorn NF Capable/Available Roadless
Ponderosa pine	3,070	35
Douglas fir	28,167	42
Lodgepole pine	4,223	6
Big sagebrush	2,990	20
Pinyon-juniper	-	-
Aspen	1,098	32
Grass	7,536	34
Limber pine	6,231	60

Environmental Consequences:

The following table shows the management prescription allocations by alternative for the Little Bighorn roadless area (80,132 acres).

Table C-8. Management prescriptions by alternative for the Little Bighorn Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.2			46,470			
1.31		13,596			7,960	600
1.32	18,212	6,132	6,117	13,345	8,322	7,669
1.33	8,742	7,890		3,982	4,271	7,360
1.5	12,052	10,293	10,293	10,230	10,961	10,387
2.2	1,051	7,242	7,242	7,242	4,845	1,050
3.31	2,726		380	428		1,660
3.4		1,754	1,754	1,754	1,758	1,331
3.5	10,549	29,068	5,940	24,549	26,899	
4.2	273					
4.3						1,036
4.4				63		
5.11	4,096	2,026	1,936	11,925	7,279	38,490
5.12	17,951	2,131		6,614	864	
5.13	4,480				1,331	10,549
5.4					5,642	

The following table summarizes the Little Bighorn roadless area acreage by alternative for the groups shown above.

Table C-9. Estimated acres retaining and not retaining roadless character for the Little Bighorn Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	74,792	76,519	79,025	74,494	74,566	68,933
Acres Not Retaining Roadless Character	5,340	3,613	1,107	5,638	5,566	11,199

Roadless Area B02I – Devil’s Canyon

Acres	14,204
Ranger District	Medicine Wheel/Paintrock
History	Originally part of the #02021 Devil’s Canyon Roadless Area (34,280 acres) as identified in RARE II analysis.
Location	Approximately 17 air miles east of the town of Lovell, Wyoming in Big Horn County. Primary access via US Highway 14A, Devils Canyon Road (FR 14), Medicine Mountain Road (FR 12), Mexican Hill Road (FR 141) and Porcupine Falls Road (FR 146). Non-motorized access is available through Bucking Mule Falls National Recreation Trail (FT 053), Tillet’s Hole Trail (FT 052), and Railroad Springs Trail (FT 054).
Surroundings	Bordered by Porcupine Creek, Forest roads, timber sales, and the Intermission Fire and salvage along its east boundary. The west boundary follows Medicine Mountain – Little Mountain Road (FR 12). Bureau of Land Management and private lands adjoin the Forest boundary in the north. Medicine Mountain and Medicine Wheel National Historic Landmark lie just outside the area boundary near the southwest corner of the Devil’s Canyon Roadless Area.
Physical and biological description	<p>The area features a series of west-facing middle-to-high elevation plateaus and ridges cut by major canyons draining to the northwest. Underlain by deep limestone rock formations, the major creek drainages have deeply incised portions of the area producing striking canyon formations and water passages. Elevations range from 5,600 feet where Porcupine Creek leaves the Forest boundary, to 9,500 feet along the area boundary below Medicine Mountain.</p> <p>Douglas-fir and limber pine forests surrounding the canyons dominate the north half of the area, where sedimentary soils and lower elevations prevail. Cool, moist conditions at higher elevations in the southern half of the area feature Engelmann spruce-subalpine fir forests in between scattered meadows of big sagebrush, Idaho fescue, and bluebunch wheatgrass.</p>
Features	The geologic features of the canyon walls, free-flowing streams, cascading falls, and rugged terrain contribute to the area’s outstanding scenic quality. Hiking trails traverse through a diverse range of vegetation types and forms. Dominant features are Devil’s Canyon, Bucking Mule Falls, and Porcupine Falls. The town of Lovell can be seen from the area at night. Bucking Mule Falls is a scenic attraction accessed by a National Recreation Trail.

Resource Uses

Vegetation Comprised of 36% Douglas fir, 36% spruce-fir, 8% sagebrush, 10% grass/forb, 8% lodgepole pine, and the remainder non-vegetated. Several timber sales are located outside the east boundary of the area. Effects from the Intermission Fire (1988) and the subsequent Intermission Salvage Sale are evident east of Porcupine Falls. The Porcupine Timber Sale is located outside the southern boundary. Douglas fir bark beetle is causing mortality in the Douglas fir forests of the area.

Some of the uplands and riparian areas show impacts from grazing. Sagebrush stands have been treated with prescribed fire in the area. Prescribed fire has been used in densely stocked and decadent sagebrush stands to increase the number and variety of native grasses and forbs available for livestock and wildlife forage, and improve livestock distribution.

There are no known occurrences of Forest sensitive species in the unit, but populations of woolly twinpod (*Physaria didymocarpa* var. *lanata*) and Cary beardtongue (*Penstemon caryi*) have been located just outside the roadless area boundary on Medicine Mountain. Several of these sensitive species populations are located in the Medicine Mountain Biological Area. A portion of the biological area is within the roadless area and contains important concentrations of rare taxa and their representative vegetation communities.

Recreation The area receives moderate recreational use in the form of hiking, fishing, horseback riding, camping, backpacking, scenery viewing, and photography. The Bucking Mule Falls Trail, a National Recreation Trail, is a popular hike for those interested in viewing Bucking Mule Creek as it plummets over canyon walls. Bucking Mule Falls Trail (FT 053), Railroad Springs Trail (FT 054), and Tillet's Hole Trail (FT 052) provide access to the rugged canyon country of the Porcupine Creek drainage. Porcupine, Bucking Mule, and Big Tepee Creeks are classified as Class III trout streams (important trout waters and fisheries of regional importance) by the Wyoming Game and Fish Department.

Adjacent recreation uses include snowmobiling, with one ungroomed state system trail that terminates near Bucking Mule Falls. There are outfitter-guide permits authorized for summer use and fall hunting near the north boundary of the area. Two cabin permits are authorized on Porcupine Creek and accessed by FR 137. The Jesse Howe Cabin, located near the Forest boundary on Hannans Coulee, is used by a permitted outfitter-guide and accessed by FR 107. The ROS ratings feature Primitive in the north half of the roadless area and Semi-primitive Non-motorized in the south.

Wildlife Big game species within the area include elk, deer, mountain lion, and black bear. Various birds, raptors, small mammals, and furbearers are found in the area including yellow-bellied marmot, beaver, grouse, and golden eagle. The area provides summer and fall range for elk and deer, and there is an area of suitable habitat for yearlong use that extends from the ridge above Hannans Coulee northward and off Forest. This general area of year round habitat is also used by cow elk for calving. A population of 30-50 Rocky Mountain bighorn sheep lives in the Devil's Canyon area adjacent to the Forest, and this population may have potential to expand use onto the Forest or interact with bighorn sheep on the

Forest. Porcupine, Bucking Mule, and Big Tepee Creeks support rainbow and brook trout populations, and are classified as Class III trout streams (important trout waters and fisheries of regional importance) by the Wyoming Game and Fish Department. Evidence of past and recent beaver activity is found along Porcupine Creek. The roadless area is contained within the Porcupine/Mann Creek lynx analysis unit. The Canada lynx (*Lynx canadensis*) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act; however, the presence of lynx has not been documented on the Forest.

Range	The area is located within portions of several active cattle and horse allotments. Typical range improvements such as fences, water developments, and cow camps are located within and adjacent to the area.
Water	The primary drainage features are Porcupine Creek, Bucking Mule Creek, Railroad Springs Creek, Big Tepee Creek, Little Tepee Creek, and Long Park Creek. The streams drain the area into the Bighorn River –Little Dry Creek watershed.
Minerals	Historic placer mining occurred along Porcupine Creek, but no significant production resulted from this activity. There are currently no active mining, oil and gas leasing, or mineral claims in this roadless area. The area is considered to have low mineral and no oil/gas potential.
Heritage resources	The Medicine Wheel National Historic Landmark is one of the most important and well-preserved Native American sacred site complexes in North America. Located outside the southwest boundary of the unit, this heritage site is under consideration for expansion into part of Devil's Canyon Roadless Area. There is a prehistoric/historic travel route adjacent to the unit. The presence of a heritage travel corridor near the boundary of the roadless area indicates high potential for other eligible heritage resources in the area.
Fire	<p>There is a history of scattered fire activity in the region. Several small fires occurred in the early 1900s that consumed a total of approximately 300 acres within the area. The Intermission Fire burned 1,210 acres near Porcupine Falls in 1988, but was contained outside the roadless area boundary.</p> <p>Fires in the Douglas fir cover type (north half of area) typically burn with mixed severity, but have the potential for large fires if strong winds are present. The southern half of the area is located within the Engelmann spruce-subalpine fir habitat type. This group has a historical fire interval of 100+ years and experiences stand replacement severity burning.</p>
Other	There are right-of-way easements along the Medicine Mountain Road and Radar Site for travel and support purposes. A Federal Aviation Administration radar site is atop Medicine Mountain. Several access points are situated on private land along the north and west boundaries. The recent purchase of the Devil's Canyon Ranch by the Trust for Public Land (for the BLM) enhances the area's manageability and overall capability ratings.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... high

Opportunities for solitude are considered very good in this roadless area. Wild river recommendation describes a core canyon area of solitude. The fringes of the area experiences increased use during big game hunting seasons.

Natural and free from disturbance high

The area is largely natural and undeveloped. Minimal disturbance by the grazing of domestic livestock, range improvements, and hiking trails occurs. An FAA radar tower is visible from certain locations within the area.

Challenge high

The area offers a high degree of challenge due to the rugged terrain with canyons and large changes in elevation.

Primitive and unconfined recreation..... med

The primary activities are fishing, hiking, and hunting on a day use basis. Campsites are limited in the canyon.

Environmental and special features high

The scenic features of the area are considered outstanding due to the steep canyons, extensive views, and the sedimentary geology. Bucking Mule Falls and Porcupine Falls are scenic destinations. The river corridors are inhabited by a wide variety of terrestrial and aquatic wildlife species.

Manageability high

Terrain along the east boundary restricts motorized access into the core area, but is more moderate along the west side where the boundary may be more difficult to manage. Several access points along private land are located along the north and west boundaries of the area. The recent purchase of the Devil's Canyon Ranch by the Trust for Public Land (for the BLM) enhances the manageability and overall capability ratings; however, concerns remain regarding the future travel management decisions in the area.

Conclusion: This area lies in the high range of capability. It has high opportunities for solitude and challenge, and will be considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No

- | | |
|---|-----|
| 4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? | No |
| 5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? | No |
| 6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? | Yes |
- Expansion of the Medicine Wheel National Historic Site is under consideration in a multi-agency process.

Conclusion: Based on the resource potentials and management considerations described above, this area has been determined to be **Available** for wilderness.

Need Determination

Nearby Wilderness: The roadless area lies approximately 25 miles from the Cloud Peak Wilderness. An additional 4 million acres of wilderness occurs in the state of Wyoming.

Wildlife Needs: No species have been identified in the Devil's Canyon area that require a wilderness environment for survival.

Areas of Biological Interest: There are no known occurrences of Forest sensitive species in the unit, but populations of woolly twinpod (*Physaria didymocarpa* var. *lanata*) and Cary beardtongue (*Penstemon caryi*) have been located just outside the roadless area boundary on Medicine Mountain. Several of these sensitive species populations are located in the Medicine Mountain Biological Area. The "biological areas" have been identified by the WYNDD as significant areas that contain important concentrations of rare taxa and their representative vegetation communities. This biological area is ranked by WYNDD as B3: high significance area.

Cover Type and Landforms: In comparison of the occurrence of various ecosystem types in nearby wilderness areas, the alpine and subalpine ecosystem types are well represented. The lower elevation ecosystems including Douglas fir forests and mountain shrub communities are uncommon in Wyoming wilderness areas. Canyon walls featuring Madison limestone, vertical cliffs, cascading water, lower elevation mosaics of forest and rangeland, and arid sagebrush steppe are some of the area's unique attributes.

ROADLESS AREA MANAGEMENT

The following table displays percentage of the cover types represented in this roadless area.

Table C-10. Percent of cover types in the Devil's Canyon Roadless Area.

Cover Type	Acres	Percent
Forb	747	5
Grass	670	5
Bare	17	-
Rock	111	1
Shrub	6	-
Sagebrush	1,105	8
Willow	51	-
Aspen	-	-
Cottonwood/willow	-	-
Douglas fir	5,111	36
Limber pine	86	1
Lodgepole pine	1,086	8
Ponderosa pine	-	-
Pinyon-juniper	-	-
Spruce-fir	5,214	36

Limited Representation Cover Types: Certain cover types identified above have limited representation in the Rocky Mountain Region wilderness system. The following table identifies those limited cover types in the Devil's Canyon Area and shows the percentage of total capable/available roadless it represents on the Bighorn National Forest.

Table C-11. Limited representation cover types in the Devil's Canyon Roadless Area.

Cover Type	Acres in Devil's Canyon Roadless Area	Percent of Total Bighorn NF Capable/Available Roadless
Ponderosa pine	-	-
Douglas fir	5,111	8
Lodgepole pine	1,086	2
Big sagebrush	1,105	7
Pinyon-juniper	-	-
Aspen	-	-
Grass	670	3
Limber pine	86	1

Public Comment: There is uncertainty regarding the outcome of the Medicine Wheel Historic Preservation Plan. Acquisition of the Devil's Canyon Ranch by the BLM adds adjoining primitive land status, but there are concerns regarding future travel management decisions.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Devil's Canyon roadless area (14,204 acres).

Table C-12. Management prescriptions by alternative for Devil's Canyon.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.2			4,930			
1.32		3,622		4,484	4,561	
1.33	5,407	839				3,043
1.5		1,139	1,139			
3.1		7,652	7,652	7,652		7,653
3.5	173		240			
4.3			216			
5.11	372			499		1,541
5.12	4,710	952	27	1,569	562	353
5.13	3,542					817
5.4					1,428	
5.5						797
mw					7,653	

The following table summarizes the Devil's Canyon roadless area acreage by alternative for the groups shown above.

Table C-13. Estimated acres retaining and not retaining roadless character for the Devil's Canyon Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	12,579	13,726	13,773	13,565	13,551	13,073
Acres Not Retaining Roadless Character	1,625	478	431	639	653	1,131

Roadless Area B023 – Walker Prairie

Acres	49,533
Ranger District	Powder River
History	Originally part of #02023 Walker Prairie Roadless Area (62,530 acres) as identified in RARE II analysis.
Location	Approximately 17 air miles west of Sheridan, Wyoming in Sheridan County. Primary access via US Highway 14, the Big Goose Road (FR 26), the Gloom Creek Road (FR 223), the Game Creek Road (FR 312), and the South Fork Little Tongue Road (FR 186). Non-motorized access available through private land on Eaton's Ranch via the Wolf Creek Trail (FT 001) and the Roosevelt Trail (FT 016). Other (non-motorized) trails in the area include the Walker Prairie Trail (FT 014), the Quartz Creek Trail (FT 003), the Herdrick Ridge Trail (FT 005), and the Big Goose Canyon Trail (FT 017).
Surroundings	The Forest boundary forms the east boundary of the area, the south boundary follows Big Goose Road (FR 26), and the Gloom Creek Timber Sale and Black Mountain are located outside the area on the west side.
Physical and biological description	Located along the eastern edge of the Big Horn Mountains, rising from the basin through a series of steep ridges and deeply incised canyons to rolling and moderately steep mountains in mid to higher elevations. Elevations range from 4,800 feet where Big Goose Creek leaves the Forest boundary, to nearly 10,000 feet in the southwest corner of the area. The area is predominantly forested, with areas of Douglas fir and ponderosa pine along Forest boundary, to a dominance of lodgepole pine in the central and western portion of the area. Much of the lodgepole type is very old, especially in the Gloom and Quartz Creek areas. Small meadows are scattered throughout the area, which contain Idaho fescue, sedges, tufted hairgrass, and alpine timothy. Walker Prairie is a narrow, extended meadow approximately 2,000 acres in size, with Idaho fescue and big sagebrush as the primary plant community. Numerous streams drain the area to the east and some have developed deeply incised and rugged canyons; most notably, the Little Tongue River, South Fork Little Tongue River, Wolf Creek, Big Goose Creek, and Rapid Creek. Cascades and waterfalls are found in area streams, including a seventy-foot waterfall on the East Fork of Big Goose Creek.
Features	Tree-covered mountainous terrain interspersed with meadows along side slopes, and deeply incised canyons in the eastern portion of the area. Lookout Mountain, Walker Mountain, and Walker Prairie are dominant visual features. The numerous canyons add variety to the landscape. The remote, natural character of the area and substantial trail network provide a large expanse of backcountry, primitive recreation. Black Mountain is a landmark peak located outside the west boundary of the area.

Resource Uses

Vegetation	Largely unmodified and heavily forested. Vegetation is comprised of 56% lodgepole pine, 14% Douglas fir, 9% spruce-fir, 4% ponderosa pine, 11% grass/forb, and the remainder is non-vegetated. Several rare perennial herbs that are sensitive species in the WYNDD occur in lower elevation habitat types in this area. Mountain lady's-slipper (<i>Cypripedium montanum</i>), Large yellow lady's-slipper (<i>Cypripedium parviflorum</i> var <i>pubescens</i>), and Broad-leaved twayblade (<i>Listera convallarioides</i>) have been documented along trails near the Forest boundary. This roadless area has decreased in size by about 13,000 acres since the 1983 inventory, due to the Gloom Creek and Squirrel Timber Sales and associated road building along the west side.
Recreation	The majority of recreational use involves camping, hiking, horseback riding, fishing, and hunting. Activity level is light to moderate, with horseback riding and hiking the most common summer activities. Walker Prairie and area trails experience moderate to heavy use during hunting season. The Little Tongue River, Wolf Creek, and Big Goose Creek (East and West Forks, mainstem) are rated as Class III fisheries, and support populations of brook, rainbow, and brown trout. Snowmobiling is popular outside the area boundary to the south along the Big Goose Trail. Special use permits are authorized for summer horseback rides and fall hunting. Nearly 80% of the area has a recreation emphasis of Semi-primitive Non-motorized, with small sections of Semi-primitive Motorized, Primitive, and Roaded Natural. Public access is controlled through private lands at Eaton's Ranch and PK Lane.
Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, beaver, ground squirrels, and grouse also inhabit the area. The area provides spring calving, summer, fall, and critical winter habitat for elk and deer. The heavily forested condition of the area provides elk security during hunting season. Several streams support fishable populations of brook, brown, and rainbow trout. Two sightings of the North American wolverine (<i>Gulo luscus</i>), a Forest sensitive species, have been documented in the southern portion of this area. The roadless area is located in part of the South Tongue/Shell lynx analysis unit. The Canada lynx (<i>Lynx canadensis</i>) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act; however, the presence of lynx has not been documented on the Forest.
Range	There are several active cattle and horse allotments and their associated range improvements within the area.
Water	Divided into the Big Goose Creek and Tongue River watersheds. The north half of the area is within the Goose Creek Municipal Watershed, which supplies water to the community of Sheridan and the Veteran's Administration Hospital (Sheridan). Several of the streams, including Rapid Creek and the West Fork of Big Goose are used to transport water for the upstream water impoundments of Park Reservoir and Twin Lakes, and flows are regulated through the area by the water users.

ROADLESS AREA MANAGEMENT

Minerals	No active mineral claims or withdrawals, and the area is not considered to have any mineral potential. Low potential for oil and gas occurrence along the east boundary.
Heritage resources	There is a ceremonial site within the area. Potential for both historic and prehistoric sites in this area.
Fire	<p>Frequent fire activity during the period 1909-1919, with six fires that burned approximately 6,000 acres in the north half of the roadless area.</p> <p>Fires in the lodgepole pine cover type typically experience a high-intensity burn regime that results in stand replacement.</p>
Other	The majority of land adjacent to the Forest boundary on the east side of the area is private, in addition to small tracts of State and Bureau of Land Management lands. Two popular access points are controlled by private ownership at Eaton's Ranch and PK Lane. A piece of private land (T55N, R86W, Sec 21) is along the Forest boundary near PK Lane and within the roadless area. State land borders the northwest corner of the area.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... high

Solitude opportunities are rated high due to the presence of mostly non-motorized trails. Increased use occurs along Wolf Creek in the summer, and along trails in the fall hunting season.

Natural and free from disturbance high

The area possesses a high degree of naturalness.

Challenge high

Offers a high degree of challenge due to the varied terrain, steep canyons, and limited access.

Primitive and unconfined recreation..... med

Key uses are hunting, horseback riding, hiking, and camping. The substantial trail network provides a large expanse of backcountry, non-motorized recreation. However, public access to many of the trails is difficult without crossing private land.

Environmental and special features high

High level of opportunity for outdoor education and environmental study. Special features include a prehistoric site. Opportunities to study sedimentary canyons and landforms, and rare plants in the lower elevations of the roadless area. Scenic features are rated high, with Walker Prairie and Bear Mountain popular destinations. Popular for big game hunting. Expansive views from the east face of the Big Horns into the Powder River Basin.

Manageability med

Manageability of the area is considered high in much of the area, but the west boundary is difficult to identify and manage. Private lands and privately controlled access points pose some challenge to manageability.

Conclusion: The area’s high degree of solitude and naturalness, its large size and primitive recreation opportunities combine to make this an excellent example of a roadless area. It will be considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

- 1. Is the area vitally needed for increased water protection and storage? No
- 2. Would wilderness designation seriously restrict important wildlife management? No
- 3. Does the area have high strategic or economic mineral development potential? No
- 4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
- 5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? No
- 6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? No

Conclusion: Based on the resource potentials and management considerations described above, this area has been determined to be **Available** for wilderness.

Need Determination

Nearby Wilderness: The roadless area lies approximately 3 miles from the Cloud Peak Wilderness. An additional 4 million acres of wilderness occurs in the state of Wyoming.

Wildlife Needs: The area contains WYNDD records for wolverine. No species have been identified in the Walker Prairie area that require a wilderness environment for survival.

Areas of Biological Interest: Several rare perennial herbs that are sensitive species in the WYNDD occur in lower elevation habitat types in this area. Mountain lady’s-slipper (*Cypripedium montanum*), Large yellow lady’s-slipper (*Cypripedium parviflorum* var *pubescens*), and Broad-leaved twayblade (*Listera convallarioides*) have been documented along trails near the Forest boundary.

Cover Type and Landforms: In comparison of the occurrence of various ecosystem types in nearby wilderness areas, the alpine and subalpine ecosystem types are well represented. The Walker Prairie area features canyon lands and lower elevation mosaics of forest and rangeland, as well as subalpine mountainous landforms. Several streams drain the area through deeply incised granitic and sedimentary canyons, before leaving the Forest boundary and emptying into the Powder River Basin. The canyon lands and lower elevation ecosystems are uncommon in Wyoming wilderness system.

ROADLESS AREA MANAGEMENT

The following table displays percentage of the cover types represented in this roadless area.

Table C-14. Percent of cover types in the Walker Prairie Roadless Area.

Cover Type	Acres	Percent
Forb	2,827	6
Grass	2,436	5
Bare	1	-
Rock	577	1
Shrub	45	-
Sagebrush	354	1
Willow	38	-
Aspen	490	1
Cottonwood/willow	-	-
Douglas fir	7,002	14
Limber pine	1,447	3
Lodgepole pine	27,439	56
Ponderosa pine	2,201	4
Pinyon-juniper	-	-
Spruce-fir	4,676	9

Limited Representation Cover Types: Certain cover types identified above have limited representation in the Rocky Mountain Region wilderness system. The following table identifies those limited cover types in the Walker Prairie Area and shows the percentage of total capable/available roadless it represents on the Bighorn National Forest.

Table C-15. Limited representation cover types in Walker Prairie Roadless Area.

Cover Type	Acres in Walker Prairie Roadless Area	Percent of Total Bighorn NF Capable/Available Roadless
Ponderosa pine	2,201	25
Douglas fir	7,002	11
Lodgepole pine	27,439	40
Big sagebrush	354	2
Pinyon-juniper	-	-
Aspen	490	14
Grass	2,436	11
Limber pine	1,447	14

Public Comment: Adjacent private ownerships do not support wilderness recommendation for the area.

Environmental consequences:

The following table shows the management prescription allocations by alternative for the Walker Prairie roadless area (49,533 acres).

Table C-16. Management prescriptions by alternative for Walker Prairie.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.2			44,763			
1.32	1,316					
2.1		5,626				
3.5	20,943	39,014	416	36,496	36,195	
4.2		1,296	1,296	1,654	1,654	
4.3		1,514	3,058	114	331	
5.11	15,658	460		8,421	8,052	
5.12	1,394					
5.13	6,834	1,623		2,848	1,697	49
5.4						42,187
5.41	3,388					2,568
5.5					1,604	4,729

The following table summarizes the Walker Prairie roadless area acreage by alternative for the groups shown above

Table C-17. Estimated acres retaining and not retaining roadless character for the Walker Prairie Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	41,948	44,079	48,926	43,003	43,109	42,116
Acres Not Retaining Roadless Character	7,585	5,454	607	6,530	6,424	7,417

Roadless Area B025 – Hideout Creek

Acres	9,285
Ranger District	Tongue and Medicine Wheel/Paintrock
History	Originally part of the #02025 Hideout Creek Roadless Area (10,750 acres) as identified in RARE II analysis.
Location	Northwest corner of Sheridan County, Wyoming, thirty air miles west of the city of Sheridan. Motorized access is provided by US Highway 14A, which parallels the southern boundary of the area, and by Fool Creek Road (FR 178), which parallels the northern boundary. The Fishhook Trail (FT 018) along Fishhook Creek is the sole designated trail in the area.
Surroundings	Bounded on the south by US Highway 14A and the North Tongue River. Fool Creek Road (FR 178) forms the north boundary. The Bear Rocks Roadless Area (BH026) is a short distance to the south of US 14A.
Physical and biological description	Area elevations range from 8,000 along the North Tongue River to 9,600 feet. The area lies along a south facing high elevation ridge. A hilly area, this region is also composed of steep canyon walls that rise abruptly from the North Tongue River. A series of small streams, including Pole Creek, Fishhook Creek, and Tongue River drain the area to the south. There is a dominance of range vegetation, with subalpine forest areas of Engelmann spruce and lodgepole pine found on cooler north-facing slopes.
Features	The unique feature within the area is the “Garden of the Gods,” a rock formation above the North Tongue River, an excellent fishery. Most of Hideout Creek Roadless Area is visible from USH 14A.

Resource Uses

Vegetation	The Hideout landscape is dominated by range vegetation comprised of 44% grass, 32% spruce-fir, 14% sagebrush, 6% willow, and the remainder is non-vegetated. Populations of Cary beardtongue (<i>Penstemon caryi</i>), a Forest sensitive species, are located in the area.
Recreation	The majority of recreational use involves hiking, horseback riding, fishing, and hunting activities. Fishing in the North Tongue River is the predominant summer recreational use. The Wyoming Game and Fish Department rate it a Class II fishery. There is moderate big game hunting pressure in the area. Snowmobiling is very popular along a groomed loop trail that follows Highway 14A to Garland Gulch and Schuler Park. The ROS ratings are Semi-primitive Motorized, Roaded Natural, and Rural (along US 14A).
Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, beaver, ground squirrels, and grouse also inhabit the area. The river corridors provide important habitat for many terrestrial and aquatic wildlife species. The riparian areas serve as feeding and nesting sites for birds and rock walls in the Garden

of the Gods offer nesting habitat for peregrine falcons. Peregrine falcons were reintroduced to the Garden of the Gods area in the late 1980s. The area includes spring calving and summer habitat for deer and elk. The Wyoming Game and Fish Department stocks Yellowstone cutthroat and Snake River cutthroat trout in the North Tongue River, which also hosts rainbow, brook, and brown trout populations. The water vole (*Microtus richardsoni*), a Forest sensitive species, has been observed along Fool Creek just outside the roadless area boundary. The roadless area is contained within the North Tongue/Cedar lynx analysis unit. The Canada lynx (*Lynx canadensis*) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act, however, the presence of lynx has not been documented on the Forest.

Range	Numerous fences and other structural range improvements within and adjacent to the area. PK cow camp is located just outside the east boundary of the unit.
Water	The North Tongue River (and tributaries) is located within the Tongue Municipal Watershed that supplies drinking water to the communities of Dayton and Ranchester. The watershed also supplies irrigation water to agricultural lands off the Forest.
Minerals	Two mining claims in the area. The area is considered to have low mineral potential and no oil/gas potential.
Heritage resources	Several ceremonial sites and a prehistoric/historic travel route are located within the unit. The presence of a heritage travel corridor indicates a high potential for other eligible heritage resources in the area.
Fire	No wildfires on record for this area. Fires that occur in the grass/sagebrush habitat type often spread quickly and kill vegetation, but do not harm the root system and stimulate regeneration of the plants.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude low

Opportunities for solitude are limited due to its narrow shape and the visibility of human influences. US Highway 14A experience a high volume of motorized use and the sights and sounds from the highway are noticeable from the area.

Natural and free from disturbance med

The area possesses a moderate degree of naturalness. Sheep grazing has affected the area. Use of roads and snowmobile trails outside the area cause disturbance. Much of the area lacks vegetative and/or topographic screening to reduce impacts of highway and road travel.

Challenge low

The area offers allows a low degree of challenge due to high elevation open ridgetops and accessibility from nearby roads.

ROADLESS AREA MANAGEMENT

Primitive and unconfined recreation..... med

Fishing and hiking are the primary activities in the area.

Environmental and special features med

The area offers a low level of opportunity for outdoor education. Views are extensive and limestone cliffs are visible from US 14A. Cliff walls provide nesting structure for raptors. Garden of the Gods is an attractive scenic feature, but not a unique landform in the Big Horn Mountains.

Manageability high

The area has an overall high level of manageability. Roads surrounding boundaries define the area.

Conclusion: This area lies in the low range of capability. The high volume of traffic on nearby roads relative to its small size inhibits its wilderness quality; therefore it will be considered **Not Capable** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Hideout Creek roadless area (9,285 acres).

Table C-18. Management prescriptions by alternative for Hideout Creek.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
3.4	4,734					
4.2		582	582	4,950	4,918	3,266
4.3				65		
4.4		4,443	4,443		167	
5.11	181	2,166	2,166	2,233		2,158
5.12	4,312	2,094	2,094	2,037	1,902	
5.13	58				2,298	2,115
5.5						1,746

The following table summarizes the Hideout Creek roadless area acreage by alternative for the groups shown above.

Table C-19. Estimated acres retaining and not retaining roadless character for the Hideout Creek Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	8,563	8,082	8,082	7,638	7,405	7,217
Acres Not Retaining Roadless Character	722	1203	1,203	1647	1,880	2,069

Roadless Area B026 – Bear Rocks

Acres	24,994
Ranger District	Tongue and Medicine Wheel/Paintrock
History	Originally part of the #02026 Bear Rocks Roadless Area (25,090 acres) as identified in RARE II analysis.
Location	Located in the central part of the north half of the Bighorn National Forest, approximately 32 air miles west of Sheridan, Wyoming. Motorized access is available via US Highway 14A, the Hunt Mountain Road (FR 10), and Big Willow Road (FR 159). There are no designated trails in the area.
Surroundings	Bordered on the north by US Highway 14A and the North Tongue River, on the east by Big Willow Creek, and on the south and west by the Hunt Mountain Road (FR 10). US Highway 14 lies approximately three miles to the east of the unit. Hideout Creek Roadless Area is a short distance to the north, and Pete's Hole Roadless Area lies to the west.
Physical and biological description	Characterized by a series of north facing drainages which flow into the North Tongue River and feature steep limestone canyons and rock outcrops along Wallrock, Trail, and Hidden Teepee Creeks. Elevations range from 8,000 feet where Bull Creek exits the roadless area to approximately 10,000 feet along the Hunt Mountain Road. Vegetation is dominated by Engelmann spruce and subalpine fir stands at the lower elevations, but changes to subalpine/alpine rangelands at higher elevations and exposed ridgetops. The open meadows consist of Idaho fescue and various sedges in the upland areas. Riparian communities along the streams feature extensive areas of willows and sedges, particularly in the Bull Creek and North Tongue River drainages.
Features	The dominant visual features are the rocky cliffs along Wallrock Creek. Hunt Mountain is visible in the western portion of the area. The sights and sounds of US Highway 14A are noticeable on the area's north side.
Resource Uses	
Vegetation	Vegetation composition, structure, and function are within the historic range of variability. Vegetation consists of 57% spruce-fir, 4% lodgepole pine, 26% grass, 6% sagebrush, and the remainder is non-vegetated.
Recreation	The majority of recreational use involves hiking, horseback riding, fishing, and hunting activities. Fishing is a popular activity in the North Tongue River - rated a Class II fishery by the Wyoming Game and Fish Department. There is moderate to heavy big game hunting pressure, particularly along the Hunt Mountain Road (FR 10). Snowmobiling outside the roadless area is popular along groomed trails that follow Highways 14 and 14A. Most of the area falls within an ROS rating of Semi-primitive Motorized, and there is also a small amount Roaded Natural.

ROADLESS AREA MANAGEMENT

Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, beaver, ground squirrels, golden eagle, and grouse also inhabit the area. The river corridors provide important habitat for many terrestrial and aquatic wildlife species. The riparian areas serve as feeding and nesting sites for birds and canyon walls offer nesting habitat for peregrine falcons. The Wyoming Game and Fish Department stocks Yellowstone cutthroat and Snake River cutthroat trout in the North Tongue River, which also hosts rainbow, brook, and brown trout populations. The roadless area is contained within the North Tongue/Cedar lynx analysis unit. The Canada lynx (<i>Lynx canadensis</i>) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act, however, the presence of lynx has not been documented on the Forest.
Range	Sheep and cattle grazing occur within the area. Typical range improvements such as fences and water developments are located in and adjacent to the area.
Water	The North Tongue River and its tributaries are located within the Tongue Municipal Watershed that supplies drinking water to the communities of Dayton and Ranchester. The watershed also supplies irrigation water to agricultural lands off the Forest.
Minerals	There are no withdrawals and the area is considered to have low mineral and no oil/gas potential.
Heritage resources	There are several ceremonial sites and a prehistoric/historic travel route adjacent to the unit. The presence of a heritage travel corridor in the region indicates high potential for other eligible heritage resources in the area.
Fire	<p>There are no wildfires on record for this area.</p> <p>Fires in the Engelmann spruce/subalpine fir habitat type have a historical fire interval of 100+ years and are subject to stand replacement severity burning. The subalpine grasslands in the higher elevations of this unit typically experiences high severity fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of the plants.</p>
Other	There are several recreation residences outside the east boundary along Bull and Big Willow Creeks.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... med

Opportunities for solitude are moderate. The area is relatively narrow and bordered by major roads.

Natural and free from disturbance med

The area possesses a high degree of naturalness. There are some impacts from sheep grazing. Sights and sounds of US 14A are noticeable from portions of the interior. Hunt Mountain Road is a high standard road. Several roads extend into the center of the area.

Challenge low

Nearby roads are reached easily – roads are located within 2 miles of most points in the area.

Primitive and unconfined recreation med

Environmental and special features med

The area offers a low level of opportunity for outdoor education. The scenic features are rated as moderate. There are views from the ridgeline along the Hunt Mountain Road. Views into the area from US 14A feature limestone cliffs and timbered ridges.

Manageability med

The area has a moderate level of manageability. Roads surrounding the north, south, and west boundaries define the area. Spur roads extend into the core. The east boundary and spur roads create manageability problems.

Conclusion: The high volume of motorized traffic on surrounding highways detracts from the natural character of the area. The small size and presence of roads limits challenge and recreation opportunities. It will be considered **Not Capable** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Bear Rocks roadless area (24,994 acres).

Table C-20. Management prescriptions by alternative for the Bear Rocks Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.32			7,260			
3.31		12,440	12,440			
3.4	2,178					
3.5	2,959	7,294		7,295	8,067	
4.2		3,056	3,090	5,260	4,661	1,155
4.4		2,205	2,205			
5.11	2,267					17,731
5.12	11,381			12,440	9	
5.13	3,223					2,868
5.21	2,986					
5.4					12,258	
5.5						3,241

ROADLESS AREA MANAGEMENT

The following table summarizes the Bear Rocks roadless area acreage by alternative for the groups shown above.

Table C-21. Estimated acres retaining and not retaining roadless character in the Bear Rocks Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D- DEIS	Alt D- FEIS	Alt E
Acres Retaining Roadless Character	21,135	22,189	22,911	21,968	21,415	19,708
Acres Not Retaining Roadless Character	3,859	2,805	2,083	3,026	3,579	5,286

Roadless Area B027 – Horse Creek Mesa

Acres	41,682
Ranger District	Medicine Wheel/Paintrock
History	Originally part of the #02027 Horse Creek Mesa Roadless Area (79,620 acres) as identified in RARE II analysis.
Location	Approximately 6 miles east of Shell, Wyoming in Big Horn County. Motorized access via US Highway 14, Copmans Tomb Road (FR 216), Wiley Creek Road (FR 217), and Sunlight Mesa Road (FR 207). Non-motorized access is provided by the Beef Trail (FT 056), the Cedar Creek Trail (FT 055), and the Grouse Creek Trail (FT 381).
Surroundings	Located on the north side of Shell Canyon. Roads and topographic features delineate the north, south and east boundaries of the area, while the Forest boundary forms the west side. Shell Research Natural Area is located on the south side of Shell Canyon.
Physical and biological description	<p>The area is located along US 14A Scenic Byway and features spectacular limestone canyons, narrow gorges, and unique, colorful rock formations. Situated on the western flank of the Big Horn range, this roadless area highlights steep-sided canyon walls that expose the sedimentary strata of Shell Canyon. Colorful Madison and Bighorn limestones, sandstones and shales of the Deadwood formation and are exhibited on canyon walls, cliffs and rock pinnacles.</p> <p>Elevations range from 5,200 feet near the Forest boundary, to 9,813 feet at the top of Cedar Mountain. Vegetation varies from juniper and mountain mahogany inhabiting the lower elevations, to a mid-elevation dominance of Douglas Fir forests in the area's midsection, to cooler sites of Engelmann spruce/subalpine fir stands in the northeast corner of the area. Cottonwoods and willows can be found along the creek bottoms in the lower elevations. The steep canyons are separated by open mesas that contain communities of big sagebrush, Idaho fescue, and bluebunch wheatgrass. The area is drained by a series of small creeks that empty into Shell Creek.</p>
Features	The area is primarily face country – the more moderate slopes are excluded. The unique sedimentary geology of the Shell Canyon area is the dominant feature of this unit. Notable rock formations are Elephant's Head and Copmans Tomb. Numerous canyons are separated by broad mesa tops such as Horse Creek and Sunlight Mesa. Cedar Creek winds through the core of the area through Douglas fir and Engelmann spruce forests, and harbors a population of genetically pure Yellowstone cutthroat trout.

Resource Uses

- Vegetation** Comprised of 32% Douglas fir, 15% spruce-fir, 20% grass/forb, 15% sagebrush, 3% juniper, 6% shrub, and the remainder is non-vegetated. Sagebrush and juniper stands have been treated with prescribed fire to increase production and diversity of native grasses and forbs, improve forage for livestock and wildlife, and reduce meadow encroachment. Exotic species are present, particularly along the Beef Trail (FT 056). Concentrated areas of mortality in the Douglas fir forests are present from Douglas fir beetle infestations.
- Recreation** The area receives light recreational use in the form of hiking, horseback riding, ATV use, photography, and fishing. There is light to moderate use of the area in the fall for big game hunting. There are three non-motorized Forest trails in the interior of the area. The Cedar Creek Trail (FT 055) begins at the end of Cedar Creek Road (FR 264) and terminates near the upper end of Cedar Creek. The Grouse Creek Trail (FT 381) begins approximately one-half mile east of the confluence of Grouse and Cedar Creeks, and traverses north to Grouse Creek Road (FR 205). The Beef Trail (FT 056) is primarily used as a livestock driveway. Several motorized trails are located in the west half of the area. Expansion of unauthorized off-trail motorized use is a concern in the area. Several special use permit holders are authorized for fall hunting in the area. The ROS rating is approximately 50% Semi-Primitive Non-Motorized, 40% Semi-Primitive Motorized, and 10% Roded Natural.
- Wildlife** Big game species within the area include elk, deer, mountain lion, black bear, and bighorn sheep. Small game species include sage grouse and blue grouse. Various birds, raptors, small mammals, and furbearers are found in the area including yellow-bellied marmot, beaver, and golden eagle. The river corridors provide important habitat for many terrestrial and aquatic wildlife species. The riparian areas serve as feeding and nesting sites for birds and canyon walls offer nesting habitat for peregrine falcons. The area includes spring calving, summer, and fall habitat for deer and elk, with the western one-third of the area providing crucial winter range and some year-long use in suitable habitat near the Forest boundary. During the period of 1992-1994, 111 bighorn sheep (*Ovis canadensis canadensis*) were transplanted to Shell Canyon by the Wyoming Game and Fish Department. The herd has experienced a high mortality rate, and only a small population of approximately 20-30 sheep persist in the Shell Canyon area. They are the only bighorn sheep known to occur on the Forest.
- Genetically pure Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*), a Forest sensitive species have been found in Cedar Creek, though it is likely that the origin of this population was planted. Cedar Creek and its Yellowstone cutthroat trout populations have been identified in the WYNDD as a Biological Area - areas that contain important concentrations of rare taxa and their representative vegetation communities. The Cedar Creek biological area is ranked by WYNDD as B3: high significance area.
- The east half of the roadless area falls within the North Tongue/Cedar lynx analysis unit. The Canada lynx (*Lynx canadensis*) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act, however, the presence of lynx has not been documented on the Forest.

Range	The area is primarily managed for livestock grazing and is administered under several allotments. Typical range improvements such as fences, water developments, and cow camps are located within and adjacent to the area. The Beef Trail (FT 056) is a historic livestock driveway that parallels US 14.
Water	Cedar Creek, Grouse Creek, Willey Creek, and Cottonwood Creek are the principal streams in the area. Shell Creek and its tributaries are part of the Shell Municipal Watershed that supplies drinking water to the community of Shell, Wyoming.
Minerals	There are currently no active mining, oil and gas leasing, or mineral claims in this unit. There are no withdrawals and the area is considered to have no oil/gas potential and low mineral potential.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	Fire has consumed approximately 5,800 acres in the area. Fires in the Douglas fir, limber pine and juniper habitat type typically burn with mixed severity, with some areas burning in the understory and some transition to the crowns of trees for short durations. This regime group has the potential for large fires, particularly if strong winds are present.
Other	Bureau of Land Management lands are located along the west boundary.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude med

The area features steep inaccessible terrain and is not heavily used. The south and east areas are influenced by Highway 14 and low standard roads – reducing the opportunity for solitude.

Natural and free from disturbance med

The steepest area is largely natural and undeveloped. There is some disturbance created by the grazing of domestic livestock and the presence of range improvements and exotic species. The sights and sounds of US Highway 14 are noticeable near south and east boundaries.

Challenge high

The area offers a high degree of challenge due to rugged terrain, with steep canyons and large changes in elevation.

Primitive and unconfined recreation med

The primary activities are hiking, fishing, hunting, and ATV use.

ROADLESS AREA MANAGEMENT

Environmental and special features high

The area offers a high level of opportunity for outdoor education and environmental study, based on its varied terrain and diverse plant and animal communities. This is the only area on the Forest with bighorn sheep. The scenic features are rated high, with extensive views, sedimentary geology, and diverse plant communities. Cedar Creek contains genetically pure Yellowstone cutthroat trout.

Manageability med

Motorized access is restricted by rugged terrain, however, boundaries are extremely long and convoluted. Bureau of Land Management lands are located along the west side.

Conclusion: The high opportunities for solitude coupled with the unique scientific and scenic features, combine to make the area **Capable** for wilderness. It will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? No
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? No

Conclusion: Based on the resource potentials and management considerations described above, this area has been determined to be **Available** for wilderness.

Need Determination

Nearby Wilderness: The roadless area lies approximately 10 miles from the Cloud Peak Wilderness. An additional 4 million acres of wilderness occurs in the state of Wyoming.

Wildlife Needs: Genetically pure Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*), a Forest sensitive species, have been found in Cedar Creek. A small population of approximately 20-30 bighorn sheep (*Ovis canadensis canadensis*) are found in the Shell Canyon area. No species have been identified in the Cedar Creek area that require a wilderness environment for survival. The forested regions of the area are valuable for cover and big game habitat.

Areas of Biological Interest: Cedar Creek and its Yellowstone cutthroat trout populations have been identified in the WYNDD as a Biological Area - areas that contain important

concentrations of rare taxa and their representative vegetation communities. This biological area is ranked by WYNDD as B3: high significance area.

Cover Type and Landform: In comparison of the occurrence of various ecosystem types in nearby wilderness areas, the alpine and subalpine ecosystem types are well represented. Cedar Creek Roadless Area consists of sedimentary breaklands and mountain slopes that form steep-sided canyons and expose sedimentary strata on the western slope of the Big Horns. Juniper and Douglas fir communities are found in this lower elevation ecosystem, which are not well represented in the Wyoming wilderness system.

The following table displays percentage of the cover types represented in this roadless area.

Table C-22. Percent of cover types in the Horse Creek Mesa Roadless Area.

Cover Type	Acres	Percent
Forb	1,817	4
Grass	6,855	16
Rock	1,733	4
Shrub	2,301	6
Sagebrush	6,161	15
Willow	74	-
Aspen	252	1
Cottonwood/willow	23	-
Douglas fir	13,252	32
Limber pine	1,391	3
Lodgepole pine	441	1
Ponderosa pine	-	-
Pinyon-juniper	1,302	3
Spruce-fir	6,080	15

Limited Representation Cover Types: Certain cover types identified above have limited representation in the Rocky Mountain Region wilderness system. The following table identifies those limited cover types in the Horse Creek Mesa Area and shows the percentage of total capable/available roadless it represents on the Bighorn National Forest.

Table C-22. Limited representation cover types in Horse Creek Mesa Roadless Area.

Cover Type	Acres in Horse Cr Mesa Roadless Area	Percent of Total Bighorn NF Capable/Available Roadless
Ponderosa pine	-	-
Douglas fir	13,252	20
Lodgepole pine	441	1
Big sagebrush	6,161	42
Pinyon-juniper	1,302	72

ROADLESS AREA MANAGEMENT

Cover Type	Acres in Horse Cr Mesa Roadless Area	Percent of Total Bighorn NF Capable/Available Roadless
Aspen	252	7
Grass	6855	31
Limber pine	1391	13
Cottonwood/willow	23	19

Environmental consequences:

The following table shows the management prescription allocations by alternative for the Horse Creek Mesa Roadless Area.

Table C-23. Management prescriptions by alternative for Horse Creek Mesa.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.32			10,980			1,433
3.31		23,917	14,726			
3.5	7,982					
4.2	1,164	4,939	4,963	5,099	5,100	
5.11	1,998					12,659
5.12	22,242			24,241	18,938	8,802
5.13						1,311
5.41	8,296	12,826	11,013	12,342	17,644	13,534
5.5						3,941

The following table summarizes the Horse Creek Mesa roadless area acreage by alternative for the groups shown above.

Table C-24. Estimated acres retaining and not retaining roadless character in the Horse Creek Mesa Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D- DEIS	Alt D- FEIS	Alt E
Acres Retaining Roadless Character	37,612	37,661	38,666	37,621	37,886	36,412
Acres Not Retaining Roadless Character	4,070	4,021	3,016	4,061	3,796	5,270

Roadless Area B029 – Piney Creek

Acres	22,932
Ranger District	Tongue
History	Originally part of #02029 Piney Creek Roadless Area (23,550) as identified in RARE II analysis.
Location	Approximately 2 miles west of Story, Wyoming in the northwest corner of Johnson County. Motorized access is provided in the north via the Kearney Lake Road (FR 320), and along the south boundary by the Willow Park Road (FR 319). Numerous motorized trails are within the area. These include the Story-Penrose Trail (FT 033), portions of the Solitude Loop Trail (FT 038), the South Piney Creek Trail (FT 080), and the Cloud Peak Cutoff Trail (FT 082).
Surroundings	The Forest boundary forms the east boundary of the area. The town of Story is adjacent to the northeast corner of this area. The Cloud Peak Wilderness is contiguous with the west side. The area is separated from the Rock Creek Roadless Area by the Willow Park Road (FR 319) and from the Little Goose Roadless Area by FR 320.
Physical and biological description	The area lies on the eastern face of the Big Horn range, rising abruptly from the Powder River basin and the foothills of Story to mid-elevations ridges, and upward to alpine tundra at the higher elevations adjacent to the Cloud Peak Wilderness. Elevations range from 5,600 feet near the Forest boundary to 10,200 feet along the wilderness area boundary. Ponderosa pine and Douglas fir stands are found along the east edge of the area, but the remainder of the area consists of continuous stands of lodgepole pine. A spruce-fir mix is found along streams and north facing slopes, and a few small meadows are scattered throughout the forest that contain Idaho fescue, sedges, tufted hairgrass, and alpine timothy. In perennially wet meadows, willows and rushes comprise the vegetation. Near the wilderness boundary at elevations approaching 10,000 feet, sparsely vegetated soils of alpine plant community are found along alpine ridges and glacial trough valleys. This glaciated region of the roadless area features moraines, potholes, lakes, and several large reservoirs that function as water impoundments and diversions for the basin area.
Features	The Piney Creek area features lodgepole pine/grouse whortleberry forests, with Engelmann spruce and subalpine fir at the higher elevations and on the north facing slopes. Views of the high alpine peaks in Cloud Peak Wilderness and down into the basin are seen from area boundaries.

Resource Uses

- Vegetation** Vegetation is comprised of 74% lodgepole pine, 12% spruce-fir, 6% ponderosa pine, 4% Douglas fir, and the remainder is non-vegetated. The WYNDD contains records of Mountain lady's slipper (*Cypripedium montanum*), a Forest sensitive species, in the northeast corner of the area. The roadless area contains part of the Story "Biological Area" – areas identified by the WYNDD for important concentrations of rare taxa and their representative vegetation communities. The biological area encompasses the habitat of several state rare orchid species and there is additional potential habitat along South Piney Creek. The Story biological area is ranked by WYNDD as B3: high significance area.
- The pine forests surrounding the town of Story are experiencing high mortality due to mountain pine beetle infestations. Story is categorized as a wildland-urban interface community with enhanced risk for wildfire in ponderosa pine forests. Treatment of conifer stands with prescribed fire, fuel break construction in association with prescribed fire, and mechanical thinning is planned to reduce the risk of catastrophic fire in the Story area.
- Recreation** The majority of recreational use involves ATV use, hiking, horseback riding, mountain biking, fishing, and hunting. There is a high volume of dispersed motorized recreation associated with the motorized Story-Penrose Trail (FT 033) and from motorized and non-motorized hunting. This route is a primary day use recreation trail for the community of Story. The roads adjacent to the area are used primarily for maintenance and operation of the reservoirs. Access to the Kearney Lake Road (FR 320) is controlled at the Forest boundary from private land; on Forest land the road is frequented by ATVs that access it from other points for travel to and from the Forest boundary.
- Recreation** The Solitude Loop Trail, the Spear Lake Trail, and Penrose Creek Trail access the Cloud Peak Wilderness. There is a high volume of motorized use by fishermen using ATVs and trailbikes to access area streams and reservoirs. South Piney and Kearney Creeks are rated as Class III fisheries by the Wyoming Game and Fish Department and host populations of brook, rainbow, and brown trout. There are no groomed snowmobile or cross-country ski trails in the area, but a small volume of snowmobilers use the Story-Penrose Trail to access lakes for ice fishing. Big game hunting pressure is moderate, with concentrated activity along motorized trails. Portions of the Solitude Loop Trail (FT 038) are impassable to ATVs due to rock slides. There are outfitter/guide camps at Beaver Lakes, Frying Pan Lake, Flatiron Lake, and Penrose Creek and several special use permits are authorized for summer recreation and fall hunting activities. The ROS classes are Semi-primitive Non-motorized, Semi-primitive Motorized, and a small area surrounding Kearney Reservoir is Roaded Natural. Access to FR 320 at the Forest boundary is controlled from private land.

Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, beaver, pikas, ground squirrels, and grouse also inhabit the area. The area provides spring calving, summer, fall, and winter habitat for elk and deer. Several streams support fishable populations of brook, brown, and rainbow trout. The pine marten (<i>Martes americana</i>), a Forest sensitive species, has been regularly documented in the lakes and reservoirs region along the west boundary. Sightings of the Three-toed woodpecker (<i>Picoides tridactylus</i>), another Forest sensitive species, have been recorded along Kearney Creek. The roadless area is located in part of the Kearney/Rock Creek and Big Goose/Piney lynx analysis units. The Canada lynx (<i>Lynx canadensis</i>) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act, however, the presence of lynx has not been documented on the Forest.
Range	The area is contained within the Little Piney and Willow Park Cattle and Horse Allotments. Suitable rangeland is very limited in the area.
Water	The area is important hydrologically as a collection and storage area for accumulated snow and the drainages are used as water transportation ways. Water released from Kearney Lake Reservoir flows down Kearney Creek into South Piney Creek. Water from Cloud Peak Reservoir is released into South Piney Creek, which flows into Willow Park Reservoir. This water then flows down South Piney Creek or is diverted into the Rock Creek and Piney diversion ditch, which transfers water into the North Fork of Rock Creek. These two streams flow large volumes of water to the valley below during the irrigation season, and they can be difficult to cross during periods of high reservoir water release. South Piney Creek provides a year-round flow of water for the Story Fish Hatchery (Wyoming Game and Fish) on the east boundary of this area.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral potential. There is low potential for oil and gas occurrence along the east boundary and development potential is minimal.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	Fire has been the most dominant disturbance factor in this landscape over the long term. Much of the area features even-aged pole sized lodgepole pine stands, a direct result of large-scale, stand-replacing fires that occurred during the late 1800s. More recent activity is the Moncreiffe Fire that burned 275 acres near Penrose Park in 1996. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement.
Other	Private land and state land are located adjacent to the Forest boundary on the east side. Access to the Kearney Lake Road (FR 320) is controlled from private land at the Forest boundary- administrative access is authorized along this route for the maintenance and service of Kearney Lake Reservoir. The State of Wyoming operates the Story Fish Hatchery and Visitor Center adjacent to the east boundary of the roadless area. There is a Wyoming Department of Game and Fish cabin outside the roadless area boundary at Snow Lake.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... low

The small distance from perimeter to core and the motorized use in the area restricts the opportunities for solitude. The town of Story provides easy access, but elsewhere public access is limited.

Natural and free from disturbance med

The area has an overall moderate degree of naturalness, with its narrow shape bounded by roads and water diversion ditches. Motorized travel by ATV's and trail bikes creates disturbance.

Challenge med

The area is rated moderately challenging due to the range in elevation.

Primitive and unconfined recreation..... high

ATV and trail bike riding dominate the recreational use in the area. Fishing and hiking are secondary activities.

Environmental and special features high

This area offers a high level of opportunity for outdoor education and environmental study. There are opportunities to study subalpine and alpine ecosystems, glacier-affected land forms, and rare plants in the Story Biological Area. The scenic features are rated high, with glacial streams, high elevations wetlands, and views of the granite peaks of the Cloud Peak Wilderness.

Manageability low

The area is narrow and oblong with some areas just over a mile across. Manageability of the area is compromised due to privately controlled access roads and motorized trail use. Private lands border most of the north and east sides. Kearney Reservoir is a ditch company water storage easement and is excluded from the roadless area to the high water line. Incursions into the area by equipment used for operation and maintenance of reservoirs/ditch may pose a management problem. Private landowners control access to roads outside the area, making administrative access more difficult.

Conclusion: This area lies in the moderate range of capability. Numerous factors reduce its manageability for wilderness and make it less capable than other areas on the forest, however, it will be considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No

3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? Yes
The area supports established summer and winter motorized recreation.
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? Yes
Possible special use conflicts with maintaining/servicing water diversion/impoundments. These structures are in close proximity to the area boundary and may require maintenance by vehicles or heavy machinery.

Conclusion: Based on the established motorized recreation and possible conflicts with maintenance of reservoirs, this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Piney Creek roadless area (22,932 acres).

Table C-25. Management prescriptions by alternative for the Piney Creek Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
3.31	175		22,932	22,932	22,932	
3.5	10,612	22,932				
5.11	366					
5.12	4,440					
5.13	7,130					
5.41	209					197
5.4						22,735

Table C-26. Estimated acres retaining and not retaining roadless character for the Piney Creek Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	19,187	20,639	20,639	20,639	20,639	19,512
Acres Not Retaining Roadless Character	3,745	2,293	2,293	2,293	2,293	3,420

Roadless Area B030 – Little Goose

Acres	24,848
Ranger District	Tongue
History	Originally part of #02030 Little Goose Roadless Area (37,760 acres) as identified in RARE II analysis.
Location	Approximately 15 air miles southwest of Sheridan, Wyoming in the southwest corner of Sheridan County, and the northwest corner of Johnson County. Motorized access is provided by the Kearney Lake Road (FR 320), the Little Goose Road (FR 309), the Little Goose Park Road (FR 314), the Little Goose Peak Road (FR 521), and the Kennwood Road (FR 313). Motorized trails within the area include the Story-Penrose Trail (FT 033), the Kennwood Trail (FT 628), the Stockwell Trail (FT 086), the Penrose Trail (FT 028), and the North Piney Trail (FT 112). Access to FR 320 at the Forest boundary is controlled from private land.
Surroundings	The east boundary follows the Kearney Lake Road, the Red Grade Road is outside the north boundary, and the Cloud Peak Wilderness is contiguous with the south boundary of this roadless area. Piney Creek Roadless Area lies immediately to the southeast.
Physical and biological description	The area is characterized by moderately steep mountainous terrain covered by lodgepole pine forests, with Engelmann spruce and subalpine fir at the higher elevations and on moist north-facing slopes. A few scattered meadows are present that contain Idaho fescue, sedges, tufted hairgrass, and alpine timothy. In perennially wet meadows, willows and rushes comprise the vegetation. Small bands of Douglas fir, limber pine, and ponderosa pine are found along the Forest boundary associated with sedimentary soils. Area elevations range from 6,500 feet near the Forest boundary to 9,358 feet atop Little Goose Peak. The area is drained by North Piney Creek in the south, and by East Fork of Little Goose Creek and Little Goose Creek in the north. Little Goose Creek forms a deep canyon near the Forest boundary.
Features	The area is typical of lodgepole pine-grouse whortleberry habitat type on granitic substrate. Little Goose Peak is a dominant landmark in the area, and near the north boundary there are several steep, narrow canyons. The Stockwell Fire burn area is visible from the valley below the Forest.

Resource Uses

Vegetation	The area is predominantly forested, with approximately 85% in forested cover types. The dominant type is lodgepole pine covering 66% of the area, followed by spruce-fir at 15%. The area is mostly natural in appearance, with the major exception being the presence of motorized trails. The Stockwell Fire burned 2,500 acres in the center of the area in 1996.
Recreation	The primary use of this area is in the summer by motorized ATV and trail bikes and extends into the fall for big game hunting. Other activities include camping, hiking, horseback riding, mountain biking, fishing, and hunting. North Piney Creek, Little Goose Creek, and East Fork of Little Goose Creek are rated Class III fisheries by the Wyoming Game and Fish Department and support populations of brook, rainbow, and cutthroat trout. Groomed snowmobile trails are located outside the area to the northwest. The majority of the area is rated for ROS as Semi-primitive Motorized, with small areas of Semi-primitive Non-motorized and Primitive in the south.
Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. The area is also inhabited by small animals and birds including marmots, beaver, ground squirrels, and grouse. The area provides spring calving, summer, fall, and critical winter habitat for elk and deer. Several streams support fishable populations of brook, brown, and rainbow trout. The roadless area is located in part of the Big Goose/Piney lynx analysis unit. The Canada lynx (<i>Lynx canadensis</i>) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act, however, the presence of lynx has not been documented on the Forest.
Range	Due to the concentration of timber in the roadless area, suitable rangeland is very limited. The area is contained within the Little Goose and Little Goose Canyon Cattle and Horse Allotments.
Water	This area is located within part of the Upper Clear Creek and Tongue River-Fook Creek watersheds. Streams are part of the Goose Creek Municipal Watershed that supplies water to the town of Sheridan and the Veteran's Administration Hospital (Sheridan).
Minerals	There are two active mining claims near the Little Goose Creek recreation residences. There is low potential for oil and gas occurrence along the east boundary.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	The Stockwell Fire, located in the center of the roadless area near Little Goose Peak, burned 2,500 acres in 1996. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement.

ROADLESS AREA MANAGEMENT

Other This roadless area is contiguous with the Cloud Peak Wilderness on the south and west sides. Private and Bureau of Land Management lands are adjacent to the Forest boundary on the north and east sides. Cloud Peak Biological Area is adjacent to the southwest side of the roadless area, and follows the approximate Cloud Peak Wilderness boundary. There is an electronic site excluded from the roadless area at the top of Little Goose Peak. Several recreation residence cabins are adjacent to the area along Little Goose Creek and Penrose Guard Station is found within the area.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... med

Solitude opportunities are rated moderate due to the motorized trail use in the area. Two roads extend from the outer roadless boundary almost to the Wilderness boundary.

Natural and free from disturbance high

The area possesses a high degree of naturalness. Fire has initiated regeneration of lodgepole pine in the area.

Challenge med

The area offers a moderate degree of challenge.

Primitive and unconfined recreation..... med

ATV, trail bikes and backcountry road use dominates the area. Recreation attractions are limited.

Environmental and special features med

The environmental and special features are considered moderate for the area, with opportunities to study wildfire ecology and succession in the Stockwell burn area. Elk calving and winter range areas are located here. Scenic features are also considered moderate due to lack of variation in most of the area.

Manageability low

The roadless area experiences motorized throughout; the use of ATV's and trail bikes pose a challenge to manageability. Two roads extend into the center and effectively bisect the area; however, along the southwest boundary the roadless area is contiguous with Cloud Peak Wilderness. There is an electronic site on Little Goose Peak in the middle of the area that is excluded (but surrounding by roadless area). The site is serviced by helicopter and snowmobile.

Conclusion: Due to the motorized recreation use, this area's ability to provide solitude in a natural and undisturbed setting is low. It will be considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? Yes
The area supports summer and winter motorized recreation.
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? Yes
Possible conflicts with maintaining/servicing communication site.

Conclusion: Based on the motorized recreation and the electronic site in the area, this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Little Goose roadless area (24,848 acres).

Table C-27. Management prescriptions by alternative for the Little Goose Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.32	326					
3.31	425		24,848	24,687	19,102	
3.5	5,366	18,959				
4.3		5,889			471	
5.11	2,278					
5.12	1,067					
5.13	15,386			161		
5.4						12,564
5.5					5,275	12,284

Table C-28. Estimated acres retaining and not retaining roadless character for the Little Goose Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	19,091	21,774	25,963	22,331	21,836	20,507
Acres Not Retaining Roadless Character	5,757	3,074	2,885	2,517	3,012	4,341

Roadless Area B03I – Cloud Peak Contiguous North

Acres	17,425
Ranger District	Tongue and Medicine Wheel/Paintrock
History	This area was originally part of the #02031 Cloud Peak Contiguous Roadless Area (151,410 acres) as identified in RARE II analysis.
Location	<p>The area is located adjacent to the north end of the Cloud Peak Wilderness in Big Horn and Sheridan Counties, Wyoming. Motorized access is provided by the Big Goose Road (FR 26), Woodchuck Road (FR 226), and Coffeen Park Road (FR 293). The southwest section of the area can be accessed via the Shell Reservoir Road (FR 271) and the Rain Trap Loop Road (FR 224). Numerous trails lead into the area; on the west side, Shell Creek Trail (FT 0570 and Mail Creek Trail (FT 817); on the east side, Coney Creek Trail (FT 021) and Antler Creek Trail (FT 405), and on the north, Rock Chuck Trail (FT 418).</p>
Surroundings	This roadless area wraps around the north end of the Cloud Peak Wilderness. It is bounded on the southwest by the Ranger Creek Ranch, on the south by Cloud Peak Wilderness, and on the north by roads.
Physical and biological description	<p>Area elevations range from 7,800 feet on the west side near Ranger Creek Campground to 10,828 feet atop Dome Peak. The area is characterized by subalpine forests bordered by the granitic mountain peaks of the Cloud Peak Wilderness. Vegetation is predominantly forested, with a mixture of lodgepole pine, Engelmann spruce and subalpine fir stands, and an understory of grouse whortleberry. Small parks and openings occur throughout the area, featuring Idaho fescue, big sagebrush, silky lupine, tufted hairgrass, and alpine timothy. In flood plains and alluvial depressions, willows and rushes are present.</p> <p>The area straddles the Big Horn Mountain divide, and streams along the west portion of the area drain into the Bighorn River via Shell Creek, while the east portion drains into the Tongue River via Big Goose Creek. Granitic mountain slopes feature areas of glacial moraines and tertiary terraces. The soils in the area have formed in materials derived from granite, gneiss, and glacial til and are sometimes sparsely vegetated. Surface boulders are common on glacial soils and at higher elevations.</p>
Features	Views of the granite peaks in the Cloud Peak Wilderness and into the Bighorn basin are the key visual features in the area. Cool, subalpine forests of lodgepole pine, Engelmann spruce, subalpine fir, and grouse whortleberry complement the area.

Resource Uses

Vegetation	Vegetation is comprised of 55% lodgepole pine, 27% spruce-fir, 12% grass/forb, and the remainder is non-vegetated. Harvest units from the Pussyfoot Timber Sale (1983) are located outside the southwest boundary. In the same vicinity, there is an area of localized “blowdown” from 1979 that was seeded with lodgepole pine. Although there are no known occurrences of sensitive species in the area, the east edge of the area is contained within the Big Goose Creek “Biological Area”. Biological areas have been identified by the WNDD for important concentrations of rare taxa and their representative communities. The Big Goose Creek biological area is ranked by WYNDD as B4: moderate significance area.
Recreation	The majority of recreational use involves hiking, horseback riding, fishing, and hunting activities. A few trails are scattered throughout the area, which access the Cloud Peak Wilderness. Several trails are open to motorcycle and snowmobile use, and the Antler Creek Trail (FT 110) is open to ATV use. There is light to moderate big game hunting pressure in the area, particularly near roads. Snowmobiling is popular along groomed trails that skirt the outer perimeter of the unit along Big Goose Road, Wood Chuck Pass, and Crooked Creek Hill. Several outfitter-guide permits are authorized for summer trail rides and fall hunting. The ROS rating is Semi-primitive Non-motorized and Semi-primitive Motorized.
Wildlife	<p>Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, pikas, beaver, ground squirrels, and grouse also inhabit the area. The area includes summer habitat for deer, elk and moose, and elk calving occurs in the Moraine Creek drainage. A number of streams support fishable populations of brook, brown, and rainbow trout.</p> <p>The water vole (<i>Microtus richardsoni</i>), a Forest sensitive species, has been observed south of Stull Lakes. Other sensitive species found in the area are the Three-toed woodpecker (<i>Picoides tridactylus</i>) and the Wood frog (<i>Rana sylvatica</i>). The Wood frog that is found in the Big Horn Mountains is morphologically distinct from other populations, although it is not yet recognized as a different taxon. The roadless area is contained within the South Tongue/Shell and Big Goose/Piney lynx analysis units. The Canada lynx (<i>Lynx canadensis</i>) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act, however, the presence of lynx has not been documented on the Forest.</p>
Range	The area contains portions of numerous cattle and sheep allotments. There are fences in and adjacent to the area.

ROADLESS AREA MANAGEMENT

Water	The area contains portions of three municipal watersheds: Shell, Tongue River, and Goose Creek, which supply water to the communities of Shell, Dayton, Ranchester, Sheridan, and the Veteran's Administration Medical Center (Sheridan). Along the east boundary, Twin Lakes # 1 and #2 are reservoirs that are part of the City of Sheridan's water supply. There are numerous reservoirs, diversions, and ditches outside the east boundary of the area in the Goose Creek watershed.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	There is no recorded fire history for the area. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement.
Other	Two blocks of private property are located along the east boundary: one centered on Dome Lake and another at Bighorn Reservoir. The Dome Mountain electronic site is located along the north boundary, and the power line corridor is the reason for the narrow neck extending from Woodchuck Pass to Dome Peak. There are several developed recreation sites outside the area boundary. This roadless area overlaps part of the Big Goose Creek Biological Area. The Cloud Peak Wilderness is contiguous with the south boundary of this roadless area.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... med

This area occupies the mid-ground between the roaded and developed Forest and the Cloud Peak Wilderness. Opportunities for solitude are limited.

Natural and free from disturbance high

The area possesses a high degree of naturalness. Use of roads and snowmobile trails near the area boundary causes disturbance.

Challenge med

The area offers a moderate degree of challenge due to unvaried terrain and most of the area is within 1 or 2 miles of roads.

Primitive and unconfined recreation..... med

Primitive recreation is limited.

Environmental and special features high

This area offers a high level of opportunity for outdoor education and environmental study. There are opportunities to study subalpine and alpine ecosystems, glacier-affected land forms, and rare plants and animals in the Big Goose Creek Biological Area. The scenic features are rated high, with glacial streams, high elevations wetlands, and views of the granite peaks of the Cloud Peak Wilderness.

Manageability low

Manageability of the area is considered low. A majority of the east boundary is indistinct, without good topographic breaks. A narrow neck is created near the Dome Electronic Site. The narrow neck created by the electronic site and the irregular boundary on the east side make the area difficult to manage. This roadless area wraps around the north end of the Cloud Peak Wilderness.

Conclusion: The high degree of solitude and naturalness is offset by the area's small size and low level of manageability. It is still considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? Yes
The area supports summer and winter motorized recreation - snowmobiling in winter, and some motorcycle/ATV use of trails.
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? Yes
Possible conflicts with maintaining/servicing (Dome Mountain) communication site.

Conclusion: Based on the area's low level of manageability and the presence of the electronic site, this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Cloud Peak Contiguous North roadless area (17,425 acres).

Table C-29. Management prescriptions by alternative for the Cloud Peak Contiguous North Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.32	6,493	5,529	5,529		8,738	2,981
1.33		3,700	3,730			1,054
3.31	507	4,898	6,104	911	27	47
3.5	3,803					
4.2	1,023					
4.3		2,744	2,062	3,750	4,054	
5.11	1,913	405		12,615	1,850	699
5.12	3,654					
5.13	32	149		149		1,527
5.4					2,756	
5.5						11,117

The following table summarizes the Cloud Peak Contiguous North roadless area acreage by alternative for the groups shown above.

Table C-30. Estimated acres retaining and not retaining roadless character for the Cloud Peak Contiguous North Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	16,032	16,535	16,608	14,391	16,234	14,599
Acres Not Retaining Roadless Character	1,393	890	817	3,034	1,192	2,826

Roadless Area B032 – Rock Creek

Acres	47,648
Ranger District	Powder River and Tongue
History	This area was originally part of #02032 Rock Creek Roadless Area (51,200 acres) as identified in RARE II analysis.
Location	The area is located approximately 8 air miles northwest of Buffalo, Wyoming in the northwest corner of Johnson County. Motorized access is provided in the north via the Willow Park Reservoir Road (FR 319) and along the south boundary by US Highway 16, the Cull Watt Park Road (FR 366), the Rock Creek Road (FR 396), and the Triangle Park Road (FR 365). There are numerous non-motorized trails in the area including the North Rock Creek Trail (FT 040), the Middle Rock Creek Trail (FT 043), the Firebox Trail (FT 549), Balm of Gilead Trail (FT 039), and the French Creek Trail (FT 042). The Bear Gulch Trail (FT 084) is authorized for motorized use, but receives very little use of any kind.
Surroundings	The Forest boundary forms the east boundary of the area. South Rock Creek, roads, and US Highway 16 are along the south boundary. Cloud Peak Wilderness is contiguous with the west side of this roadless area and the Willow Park Road (FR 319) runs along the north boundary. Piney Creek Roadless Area is located immediately to the north.
Physical and biological description	<p>The area lies on the eastern face of the Big Horns, rising abruptly from the Powder River basin to mid-elevations ridges, and upward to alpine tundra at the higher elevations adjacent to the Cloud Peak Wilderness. Area elevations range from 6,000 feet near the Forest boundary to 10,980 feet along the wilderness area boundary. Ponderosa pine forests are located along the east boundary of the area, but the remainder consists of continuous stands of lodgepole pine, with Engelmann spruce and subalpine fir at the higher elevations and on moist north-facing slopes. Rock Creek and its tributaries flow through mountain slopes, canyons and escarpments, past areas of rock outcrop – barren rock formations and spires of exposed granite and gneiss. A few upland meadows are scattered throughout the forest that contain Idaho fescue, sedges, tufted hairgrass, and alpine timothy. In perennially wet meadows, willows and rushes comprise the vegetation.</p> <p>Near the wilderness boundary at elevations approaching 10,000 feet, sparsely vegetated soils of an alpine plant community are found along alpine ridges and glacial trough valleys. This glaciated region of the roadless area features moraines, potholes, lakes, and several large reservoirs that function as water impoundments and diversions for the basin area.</p>

ROADLESS AREA MANAGEMENT

Features	<p>The Rock Creek area is one of the most primitive areas on the Bighorn National Forest outside of wilderness. Largely unmodified and natural in appearance, it features areas of pristine lodgepole pine/grouse whortleberry habitat, with small patches of Engelmann spruce and subalpine fir complementing the pine forests. The many hiking/horseback trails offer opportunities for solitude in a wilderness setting. Vistas of the high alpine peaks in the Cloud Peak Wilderness and down into the basin are seen from area boundaries.</p>
Resource Uses	
Vegetation	<p>Vegetation is comprised of 71% lodgepole pine, 15% spruce-fir, 7% ponderosa pine, 2% aspen, and the remainder is grassland. Pheasant Creek is a potential Research Natural Area located in the north portion of the roadless area featuring a large area of undisturbed lodgepole pine/grouse whortleberry habitat type. The Rock Creek drainage and the area near the town of Story are experiencing high mortality in pine forests due to mountain pine beetle infestations.</p>
Recreation	<p>The majority of recreational use involves camping, hiking, horseback riding, mountain biking, fishing, and hunting. Two trails, the Middle Rock Creek Trail (FT 043) and the Elk Lake Trail (FT 219) access the Cloud Peak Wilderness. South Fork Rock Creek is rated as Class III fishery by the Wyoming Game and Fish Department and hosts populations of brook, rainbow, and brown trout. There are no groomed snowmobile or cross-country ski trails in the area – winter snow levels generally do not support snowmobile use on trails. Big game hunting pressure is light to moderate.</p>
Recreation	<p>There are several outfitter-guide permits authorized for summer recreation and fall hunting activities. Paradise Guest Ranch and the HF Bar are two private ranches located outside the area boundary that conduct guided trail rides/pack trips in Rock Creek area during the summer and fall months. The southeast portion of the roadless area is closed to off-road motorized use year round. The remainder of the area is closed to off-road motorized use except snowmobiles between November 16 and May 15. The ROS classes consist of Primitive in the core area, with Semi-primitive Non-motorized and Semi-primitive Motorized near the boundaries. Access to the Willow Park Reservoir Road (FR 319) is controlled from private and state lands. The road is restricted to vehicle use for maintenance and service of Willow Park Reservoir.</p>
Wildlife	<p>Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, beaver, pikas, ground squirrels, and grouse also inhabit the area. The area provides spring calving, summer, fall, and critical winter habitat for elk and deer. Several streams support fishable populations of brook, brown, and rainbow trout.</p> <p>The pine marten (<i>Martes americana</i>), a Forest sensitive species, has been regularly documented in the lakes and reservoirs region outside the west</p>

boundary of the area. The roadless area is located in part of the Kearney/Rock Creek lynx analysis unit. The Canada lynx (*Lynx canadensis*) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act; however, the presence of lynx has not been documented on the Forest.

Range	Due to the concentration of timber in the roadless area, suitable rangeland is very limited. Hepp cow camp is located at Willow Park Reservoir. The area is contained within the Little Piney, Willow Park, and Rock Creek Cattle and Horse Allotments.
Water	The area is important hydrologically as a collection and storage area for accumulated snow and the drainages are used as water transportation ways. Water released from Kearney Lake Reservoir flows down Kearney Creek into South Piney Creek. Water from Cloud Peak Reservoir is released into South Piney Creek, which flows into Willow Park Reservoir. This water then flows down South Piney Creek or is diverted into the Rock Creek and Piney diversion ditch, which transfers water into the North Fork of Rock Creek. These two streams flow large volumes of water to the valley below during the irrigation season, and they can be difficult to cross during periods of high reservoir water release. South Piney Creek provides a year-round flow of water for the Story Fish Hatchery (Wyoming Game and Fish) on the east boundary of this area.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral potential. The area was proposed for inclusion with the Cloud Peak Wilderness in the 1984 Wyoming Wilderness Act, but was excluded on the basis of existing oil and gas leases. There is currently low potential for oil and gas occurrence along the east boundary and development potential is minimal.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	Fire has been the most dominant disturbance factor in this landscape over the long term. Much of the area features even-aged pole sized lodgepole pine stands, a direct result of large scale stand-replacing fires that occurred during the late 1800s. More recent fires in the area include the Rock Creek Fire that consumed 930 acres in 1919. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement.
Other	Private and state lands are located adjacent to the Forest boundary on the east side. Access to FR 319 is controlled at the Forest boundary from private and state lands. The Bud Love Big Game Winter Range (State of Wyoming) is adjacent to the east boundary of the roadless area. Private guest ranches bordering the roadless area are Paradise Guest Ranch in the southwest and HF Bar Ranch to the east.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... high

Solitude opportunities are rated high.

Natural and free from disturbance high

The area possesses a high degree of naturalness that remains generally unaltered by human influences. The remote and wild character of this area is the primary attraction. Some disturbance is created near motorized trails. The southeast corner of the area is within the sights and sounds of US Highway 16.

Challenge high

The area offers a high degree of challenge due to the varied terrain, steep trails, and remoteness of the site. Navigation through dense timber is difficult.

Primitive and unconfined recreation..... high

Hunting, horseback (trail) riding, and hiking are the dominant uses.

Environmental and special features high

This area offers a high level of opportunity for outdoor education and environmental study. This roadless area contains the potential Pheasant Creek Research Natural Area. The scenic features are rated high, with glacial streams, high elevations wetlands, rock spires and outcrops, and views into the Cloud Peak Wilderness and surrounding Powder River basin.

Manageability med

Manageability of the area is considered high in most of the area, but is somewhat reduced in the east due to a privately controlled access road. The east boundary adjoins state and private lands and the area is contiguous to the Cloud Peak Wilderness along the western boundary. Four low standard roads extend into the area along the south boundary. The southeast portion of the area along French Creek contains a water diversion ditch for agricultural irrigation purposes. Excluding areas along the south edge would improve manageability.

Conclusion: The area's high degree of solitude and naturalness, its large size and primitive recreation opportunities combine to make this an excellent example of a roadless area. It will be considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No

3. Does the area have high strategic or economic mineral development potential? No
There is low potential for oil and gas occurrence in the area.
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? No
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? Yes
Possible special use conflicts with maintaining/servicing water diversion/impoundments. These structures are in close proximity to the area boundary and may require maintenance by vehicles or heavy machinery.

Conclusion: Based on the resource potentials and management considerations described above, the core of the area has been determined to be **Available** for wilderness.

Need Determination

Nearby Wilderness: Cloud Peak Wilderness is contiguous with the west boundary of Rock Creek. An additional 4 million acres of wilderness occurs in the state of Wyoming.

Areas of Biological Interest: Pheasant Creek is a potential Research Natural Area located entirely within this roadless area featuring a large area of undisturbed lodgepole pine/grouse whortleberry habitat type.

Wildlife Needs: The WYNDD contains records of the pine marten (*Martes americana*), a Forest Service sensitive species, adjacent to the roadless area boundary on the west side. No species have been identified in the Rock Creek area that require a wilderness environment for survival.

Cover Type and Landform: In comparison of the occurrence of various ecosystem types in nearby wilderness areas, the alpine and subalpine ecosystem types are well represented. The Rock Creek Roadless Area is composed of mainly mid-elevation ecosystems. The area's remote setting of pristine lodgepole pine forests, canyons, rocky outcrops and rock spires, drained by snowmelt streams is not well-represented in the Wyoming wilderness system.

The following table displays percentage of the cover types represented in this roadless area.

Table C-31. Percent of cover types in the Rock Creek Roadless Area.

Cover Type	Acres	Percent
Forb	-	-
Grass	1,634	3
Bare	8	-
Rock	377	1

ROADLESS AREA MANAGEMENT

Cover Type	Acres	Percent
Shrub	-	-
Sagebrush	304	1
Willow	54	-
Aspen	1,186	2
Cottonwood/willow	75	-
Douglas fir	184	-
Limber pine	-	-
Lodgepole pine	33,020	71
Ponderosa pine	3,462	7
Pinyon-juniper	-	-
Spruce-fir	7,344	15

Limited Representation Cover Types: Certain cover types identified above have limited representation in the Rocky Mountain Region wilderness system. The following table identifies those limited cover types in the Rock Creek Roadless Area and shows the percentage of total capable/available roadless it represents on the Bighorn National Forest.

Table C-32. Limited representation cover types in the Rock Creek Roadless Area.

Cover Type	Acres in Rock Creek Roadless Area	Percent of Total Bighorn NF Capable/Available Roadless
Ponderosa pine	3,462	40
Douglas fir	184	-
Lodgepole pine	33,020	48
Big sagebrush	304	2
Pinyon-juniper	-	-
Aspen	1186	35
Grass	1,634	7
Cottonwood/willow	75	64

Public Comment: There is strong support for non-motorized backcountry use and recommended wilderness for the area.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Rock Creek roadless area (47,648 acres).

Table C-33. Management prescriptions by alternative for the Rock Creek Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.2			20,327		33,711	
1.31		20,353		18,695		4,441
1.32	9,724					
1.33		350				
1.5		2,689	3,703			
2.2		9,140	9,138	9,140		
3.31	3,734		5,647	6,461	1,494	867
3.4		926				
3.5	6,804	2,244	81			
4.2		693	693	693	693	
4.3		3,201			2,207	
5.11	7,740					587
5.12	3,477			112		
5.13	7,873					1,499
5.4						33,909
5.41	8,296	8,052	8,059	12,547	9,543	6,345

The following table summarizes the Rock Creek roadless area acreage by alternative for the groups shown above.

Table C-34. Estimated acres retaining and not retaining roadless character for the Rock Creek Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	41,922	45,516	46,534	46,225	46,662	41,591
Acres Not Retaining Roadless Character	5,726	1,132	1,114	1,423	986	6,057

Roadless Area B033 – Grommund Creek

Acres	6,192
Ranger District	Powder River
History	This area was originally part of the #02033 Grommund Creek Roadless Area (12,800 acres) as identified in RARE II analysis.
Location	The area is located approximately 10 air miles southwest of Buffalo, Wyoming in Johnson County. Primary access to the area is provided by US Highway 16, the Grommund Road (FR 372), the Elgin Park Road (FR 460), Little Sourdough Road (FR 472213), and the Tie Hack Road (FR 21). Trails that access the area include the Tie Hack Trail (FT 107), the Brush Creek Trail (FT 217), the Saddle Crossing Trail (FT 408), and the Grommund Point Trail (FT 407).
Surroundings	The Forest boundary forms the east boundary of the area, Clear Creek and US 16 bound the north, and the south is bounded by roads and the Elgin Timber Sale. Rock Creek Roadless Area lies north of this area.
Physical and biological description	The area lies on the eastern face of the Big Horns, rising abruptly from the Powder River basin into a series of steep slopes that crest into a broad rolling upland. Elevations range from 6,400 feet near the Forest boundary to 7,834 feet above Brush Creek. Nearly homogenous forests of lodgepole pine are interspersed with many small parks and openings that contain Idaho fescue, silky lupine, tufted hairgrass, and various sedges. Several creeks drain the area to the east, some of which form steep canyons in the drainage. Narrow bands of ponderosa pine –grouse whortleberry habitat extend on the dryer south-facing slopes below Clear Creek. The area lies in the rain shadow of Cloud Peak and receives less precipitation than like elevation areas further to the north in the Big Horn Mountains; approximately 18-23 inches annually.
Features	The area is quite typical of the lodgepole forest associated with granitic substrate on the Bighorn National Forest. The uniform composition of the area is broken only by small areas of rock outcrop and a few steep canyon drainages.
Resource Uses	
Vegetation	Vegetation is comprised of 76% lodgepole pine, 7% ponderosa pine, 3% aspen, and 13% grass. Prescribed fire has been utilized in the ponderosa pine habitat type to reestablish fire's natural ecological role and resulting vegetation conditions. A few aspen stands have also been treated with prescribed fire to stimulate regeneration. The Elgin Timber Sale (1990) harvest units are located outside the area near the south boundary.
Recreation	The majority of recreational use involves hiking, hunting, and ATV riding. The Tie Hack Trail (FT 107) is a nonmotorized trail that traverses from the Pines Lodge to Tie Hack Reservoir. There are also several motorized trails (Brush Creek Trail FT 217 and Saddle Crossing Trail FT 408) in the area. A groomed

	<p>snowmobile trail is located outside the area boundary west of US 16. There is moderate big game hunting pressure in the area, particularly near roads. Lodges and recreation residences are found outside the roadless area along US Highway 16. The majority of the area is rated for ROS as Semi-primitive Non-motorized, with a band of Semi-primitive Motorized along the Brush Creek drainage.</p>
Wildlife	<p>Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, beaver, ground squirrels, and grouse also inhabit the area. The area provides summer and fall habitat for deer and elk, with areas surrounding the perimeter suitable habitat for crucial winter and year-long range. Several streams support fishable populations of brook, brown, and rainbow trout. The Northern goshawk (<i>Accipiter gentilis</i>), a Forest sensitive species, has been documented north of Tie Hack Reservoir. There is a historic sighting of the water vole, (<i>Microtus richardsoni</i>), on Grouse Mountain that dates back to 1948.</p>
Range	<p>There are several active cattle and horse allotments within the area. Typical range improvements such as fences and cow camps are located in and adjacent to the area.</p>
Water	<p>Principal features in the area are Middle Clear Creek, South Clear Creek, Clear Creek, Grommund Creek, and Brush Creek. Streams are in a natural free-flowing state and are located in the Clear Creek Municipal Watershed, which supplies water to the City of Buffalo.</p>
Minerals	<p>There are no active mineral claims or withdrawals, and the area is considered to have no mineral potential. There is low potential for oil and gas occurrence here.</p>
Heritage resources	<p>There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.</p>
Fire	<p>A fire consumed 5,800 acres along the east boundary. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement.</p>
Other	<p>Private land is located adjacent to the Forest boundary on the east side. Private recreation residence development known as Camp Comfort is along US Highway 16. There are private lands between Highway 16 and the roadless area.</p>

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude low

Solitude opportunities are rated low. Multiple access points and ATV use along motorized trails in and surrounding area boundaries inhibits a primitive, isolated experience.

ROADLESS AREA MANAGEMENT

Natural and free from disturbance med

The area possesses a high degree of naturalness, with pine forests, wet meadows, and brushy drainages. Use of motorized trails creates disturbance.

Challenge high

The area offers a high degree of challenge due to steep canyons and dense vegetation, particularly in draws and along the east face.

Primitive and unconfined recreation..... med

ATV riding and hunting are the primary activities here.

Environmental and special features med

This area offers a low level of opportunity for environmental education. The scenic features are rated moderate. The east portion of the area provides spring and fall wildlife range.

Manageability med

Manageability of the area is considered moderate. Some of the boundary lines are indistinct without good topographic breaks. There is established motorized use by ATV's.

Conclusion: The area exhibits a high degree of naturalness, but is otherwise limited by the motorized recreation and low level of manageability. It will still be considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? Yes
The area supports established summer motorized recreation use. There is a proposed ATV loop trail system.
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? No

Conclusion: The small size of the area combined with the established motorized use precludes it for wilderness availability; therefore it has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Grommund Creek roadless area (6,192 acres).

Table C-35. Management prescriptions by alternative for Grommund Creek

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.31						618
1.33	2,324			2,048		1,693
3.31	146					146
3.5	1,519	4,616	4,694			
4.2	182	1,468	1,468	1,468	1,468	182
5.11	371		30	2,017	4,065	1,996
5.12	1,361			659	659	
5.13	289	108				
5.4						907
5.5						650

The following table summarizes the Grommund Creek roadless area acreage by alternative for the groups shown above.

Table C-36. Estimated acres retaining and not retaining roadless character for the Grommund Creek Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	5,692	5,404	5,423	5,429	5,020	5,476
Acres Not Retaining Roadless Character	500	788	769	763	1,172	716

Roadless Area B036 – Hazelton Peaks

Acres	7,230
Ranger District	Powder River
History	Originally part of the #02036 Hazelton Peaks Roadless Area (10,500 acres) as identified in RARE II analysis.
Location	Approximately 24 miles southwest of Buffalo, Wyoming in Johnson County. Motorized access to the area is available through USH 16, the Hazelton Road (Johnson County Road 3), the North Fork Powder River Road (FR 29), and the Munkres Pass Road (FR 448). Although there are no developed trails in the area, there are numerous undesignated hiking opportunities.
Surroundings	This roadless area is located in the southeast corner of the Bighorn National Forest. Munkres Pass and US Highway 16 are located to the north of the area and the Hazelton Road and Lower Doyle Creek Campground are situated along the southeast boundary.
Physical and biological description	Hesse Mountain, Hazelton Pyramid, and Hazelton Peak, which comprise the southern-most peaks of the Bighorn National Forest, dominate the area. The peaks are at the edge of the uplifted granitic core of the Big Horns, and are characterized by rocky summits above timberline with little or no vegetation except for small amounts of alpine plant community and krummholtz. The mountainsides and ridges surrounding the three peaks are forested with lodgepole pine, Engelmann spruce, subalpine fir, and an understory of grouse whortleberry. Small parks and openings in timbered areas and in saddles between the peaks feature Idaho fescue, big sagebrush, silky lupine, tufted hairgrass, sedges, and alpine timothy. Willows and rushes are present in the wetter areas of flood plains and alluvial depressions. The west side of the area forms the headwaters of the North Fork of the Powder River, while the Middle Fork of Crazy Woman Creek drains the east side. Area elevations range from 8,200 feet along Doyle Creek to 10,534 feet at the top of Hazelton Peak.
Features	The area contains varied visual resources with the three landmark peaks sloping into forested benches and valley below. Views from the peaks overlook the surrounding forest and private lands to the south.

Resource Uses

Vegetation	Vegetation composition, structure, and function are within the historic range of variability. Vegetation is comprised of 46% lodgepole pine, 36% spruce-fir, 8% grass, and the remainder is non-vegetated. The area contains some of the oldest conifer stands in the Big Horns, where mature conifers, large snags, and multiple canopies form late-successional habitat. The moist riparian areas support diverse willow, moss, and forb communities. Harsh granite slopes at the top of the peaks feature the alpine plant community and krummholtz. Logging has occurred outside the area boundary in several locations. The roadless area is located within the Powder River Pass-Hazelton Peaks “Biological Area” – areas identified by the WYNDD for important concentrations of rare taxa and their representative vegetation communities. This biological area is ranked by WYNDD as B3: high significance area.
Recreation	The area receives light recreational use in the form of hiking, horseback riding, fishing, and hunting. The area is used during fall archery and rifle seasons, and in the summer for hiking. Streams surrounding the roadless area are popular for fishing – the Powder River and Doyle Creek support populations of brook, brown, and rainbow trout. Significant snowmobile use occurs in the surrounding area. Outfitter-guide permits are authorized for fall hunting. Lower Doyle Creek Campground is located outside the area boundary, near the southeast corner of the unit. The majority of the area has an emphasis of Semi-primitive Non-motorized recreation, with Semi-primitive Motorized and Roaded Natural near the area boundaries.
Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. The area is also inhabited by small animals and birds including marmots, pikas, beaver, ground squirrels, and grouse. The area provides summer habitat for deer and elk. A number of nearby streams support fishable populations of brook, brown, and rainbow trout. The pine marten (<i>Martes americana</i>), a Forest sensitive species, has been regularly documented in the area near Munkres Pass. Another Forest sensitive species, the Three-toed woodpecker (<i>Picoides tridactylus</i>), has been observed at a breeding site along the west boundary of the area.
Range	There are several active cattle, horse, and sheep allotments within the area. Typical range improvements such as fences are found in and adjacent to the area.
Water	The roadless area contains portions of the North Fork Powder River and the North Fork of Crazy Woman watersheds. The Hazelton Peaks region is an important collection and storage area for accumulated snow.
Minerals	No active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in the area.
Fire	No recorded fire history for the area. Fires in the lodgepole pine and Engelmann spruce habitat types typically experience a high-intensity burn regime that results in stand replacement.

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Other Several tracts of private land are located near the southwest boundary of the area. Recreation residence development has occurred on private land just outside the Forest boundary.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... high

Solitude opportunities are rated high due to limited access and the lack of motorized trails.

Natural and free from disturbance med

The area offers a high degree of naturalness within the area boundary, but the viewshed is moderate due to the views of area roads and timber harvest units.

Challenge med

Most of the area offers a moderate degree of challenge. The area is narrow with limited distance across. An alpine environment with harsh climate and exposed rocky slopes of granite prevails on the Hazelton Peaks.

Primitive and unconfined recreation..... med

The primary activities are hunting and hiking.

Environmental and special features high

This area offers a high level of opportunity for environmental study. There are opportunities to study subalpine and alpine ecosystems and rare plants in the Powder River-Hazelton Peaks Biological Area. This area includes some of the oldest and largest conifer stands in the Bighorn National Forest.

Manageability low

Manageability of the area is considered low. The boundary lines are indistinct without good topographic breaks. The area is not contiguous with the Cloud Peak Wilderness.

Conclusion: The area contains some unique environmental features, but the small size, low level of manageability, and its island-like character surrounded by a roaded and developed landscape inhibits the area's wilderness potential. It will be considered **Not Capable** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Hazelton Peaks roadless area (8,975 acres).

Table C-37. Management prescriptions by alternative for the Hazelton Peaks Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.32	975		7,942			470
3.5	2,487	8,316	317	6,902	6,334	
4.2		21	21	21	18	
5.11	2,221	447	695	1,414	1,416	
5.12	1,317					
5.13	1,975	191		638	698	2,779
5.4					509	
5.5						5,726

The following table summarizes the Hazelton Peaks roadless area acreage by alternative for the groups shown above.

Table C-38. Estimated acres retaining and not retaining roadless character for the Hazelton Peaks (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	7,558	7,993	8,800	7,806	7,769	6,996
Acres Not Retaining Roadless Character	1,417	983	175	1,169	1,206	1,979

Roadless Area B037 – Leigh Creek

Acres	6,700
Ranger District	Powder River
History	Originally part of #02037 Leigh Creek Roadless Area (25,320 acres) as identified in RARE II analysis.
Location	Approximately 7 miles northeast of Ten Sleep, Wyoming. Primary access is provided by US Highway 16, the old Tensleep Canyon highway (FR 18), the Sand Draw Road (FR 436), and the Weeping Rock Road (FR 434).
Surroundings	The area is located on the south side of US Highway 16 in Tensleep Canyon. The old highway (FR 18) traverses along the north boundary. The east side is delineated by roads, timber harvest units, and topographic features, and the south boundary follows roads and private land. The Forest boundary defines the west side.
Physical and biological description	<p>The area features a series of middle elevation plateaus and ridges cut by several major canyons draining to the southwest. Leigh Creek forms a narrow, steeply incised canyon that is densely vegetated with riparian, shrub, and forest vegetation types. The area's north boundary is located in scenic Tensleep Canyon which features canyon walls, steep cliffs, and weathered pinnacles of Bighorn and Madison limestones. Several intermittent and perennial streams and springs empty into Tensleep Creek; a few form seasonal waterfalls during periods of high runoff as they cascade over the rim of Tensleep Canyon.</p> <p>Elevations range from 5,200 feet where Tensleep Creek leaves the Forest boundary to 8,355 feet. The Tensleep Canyon rim and the rugged side canyons in Leigh, Child's and Tepee Creeks are lined with Douglas fir forests on north-facing aspects, and mature widely spaced ponderosa pine forests on south slopes and mesa tops. Juniper and limber pine are also part of the lower elevation mosaic. Large meadows of big sagebrush, Idaho fescue, silky lupine, and sedge communities are also found above the canyon rim. Chokecherry, dogwood, and currant occur along riparian corridors at lower elevations.</p>
Features	Scenic vistas of Tensleep Creek flowing through Tensleep Canyon, with its steep canyon walls, sedimentary geology and green Douglas fir lined canyon walls are the primary attraction from the north boundary of the unit. Leigh Creek, Tepee Creek, and Child's Creek form rugged side canyons and drain into Tensleep Creek. The canyons are forested with Douglas fir and bridged by mesa tops of ponderosa forests and sagebrush steppe.

Resource Uses

Vegetation	<p>Vegetation is in a natural condition, with 36% Douglas fir, 26% ponderosa pine, 24% sagebrush, 6% grass, 4% juniper, 3% limber pine, and 1% cottonwood/willow.</p> <p>The Douglas fir stands are experiencing mortality from Douglas fir beetle infestations— mechanical harvest is planned along roadless area boundaries to reduce stand density and the risk of wildfire. Limber pine has also experienced increased mortality due to a complex of agents. Prescribed fire will be used in these forests to alter the fuel buildup from dead pines. A combined treatment of thinning and prescribed fire is planned for ponderosa pine stands. Prescribed fire will be also used to treat decadent and densely stocked sagebrush stands to increase grass and forb production and improve habitat diversity. The area surrounding Leigh Creek Campground and Tensleep Fish Hatchery is categorized as a wildland urban interface zone; thinning is planned to reduce the risk of fire around these developments.</p> <p>The area contains several sensitive plant species in the Leigh Canyon “Biological Area”. Biological areas have been identified by the WYNDD for important concentrations of rare taxa and their representative communities. The Leigh Canyon biological area is ranked by WYNDD as B2/B3: very high significance area. Leigh Canyon is also a potential Research Natural Area.</p>
Recreation	<p>Recreational use is light and involves hunting, and ATV riding. Much of the traffic on roads along the south boundary involves travel to and from grazing allotments. Recreation use is concentrated along the US 16 corridor, with hiking, fishing, and camping along Tensleep Creek. Rock climbing occurs in Tensleep Canyon and ice climbers scale frozen falls in the winter. Some cross country skiing takes place on the old highway (adjacent to the roadless area) when snow depths are adequate. There is moderate big game hunting activity in the fall. Most of the area is classified for ROS as Semi-Primitive Motorized recreation, with a narrow band of Roaded Natural along the old Tensleep Canyon highway.</p>
Wildlife	<p>Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. The area is also inhabited by small animals and birds, including marmots, beaver, ground squirrels, and grouse. The area provides year-long habitat for elk and deer, with winter range near the Forest boundary. The Lee Creek Vee serves as an elk calving region. Forest Road 18 has a seasonal closure to protect elk during the calving season.</p>
Range	<p>There are several active cattle and horse allotments in the area with their associated developments such as fences, pipelines and spring developments.</p>
Water	<p>Principal streams in the unit are Leigh Creek, Teepee Creek, and Child’s Creek; these drain the area into the Tensleep Creek watershed.</p>
Minerals	<p>There are no active mineral claims or withdrawals, and the area has no mineral/oil/gas potential.</p>
Heritage resources	<p>Leigh Monument is a historic landmark at the confluence of Leigh Creek and Tensleep Creek. There is a large concentration of prehistoric sites in this area.</p>

ROADLESS AREA MANAGEMENT

- Fire** The Douglas fir, limber pine and juniper habitat type typically burn with mixed severity, with some areas burning in the understory and some transition to the crowns of trees for short durations. Ponderosa pine stands historically experience frequent, low-intensity fires that burn the understory, keeping mature stands open and park-like. Fires in the grass/sagebrush habitat type experience fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of the plants.
- Other** Leigh Creek Campground (USFS) is located adjacent to the area's northwest boundary. Tensleep Fish Hatchery, operated by the Wyoming Game and Fish Department, is also located along the north boundary at the confluence of Leigh and Tensleep Creeks. The Nature Conservancy's Tensleep Preserve lies south of the Forest boundary.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... med

The deep canyon topography offers opportunity for solitude, but is largely inaccessible. Most of the accessible area is reached by roads.

Natural and free from disturbance med

The area possesses a high degree of naturalness, but the presence of roads into the core restricts the feeling of solitude, isolation, and lack of disturbance.

Challenge med

The area offers a high degree of challenge due to the steep, canyon terrain and lack of hiking trails. Uplands are moderately challenging.

Primitive and unconfined recreation..... med

Hunting and ATV riding are the primary activities in the area.

Environmental and special features high

The scenic features are rated high due to the sedimentary geology, deep canyon topography, and extensive views. Leigh Creek is a proposed Research Natural Area that contains sensitive plants; however, access for environmental study purposes is hampered by the natural protection of dense vegetation and steep canyon walls. Historic values are rated high based on the large concentration of prehistoric sites in the area.

Manageability low

The presence of roads into the core presents a challenge to manageability, although manageability is rated high along the north boundary in Tensleep Canyon. While cliffs and canyons create some barriers to travel, distances to roads vary from ½ mile to 2 miles. This area has a very high ratio of boundary miles to area acres.

Conclusion: The area's highly natural environment is offset by the poor manageability and limited opportunities for solitude. It is considered **Not Capable** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Leigh Creek roadless area (6,700 acres).

Table C-39. Management prescriptions by alternative for the Leigh Creek Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
2.2		1,238	1,238	1,238	1,160	
3.5	3,575		4,199			
4.2	164	1,263	1,263	1,263	1,263	
4.3						164
5.11	144	50				5,925
5.12	2,769	4,149		4,199	4,277	
5.13	48					611

The following table summarizes the Leigh Creek roadless area acreage by alternative for the groups shown above.

Table C-40. Estimated acres retaining and not retaining roadless character for the Leigh Creek Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	5,990	6,022	6,027	6,027	6,020	5,315
Acres Not Retaining Roadless Character	710	678	673	673	680	1,385

Roadless Area B04I – Cloud Peak Contiguous West

Acres	45,245
Ranger District	Medicine Wheel/Paintrock
History	Originally part of the #02031 Cloud Peak Contiguous Roadless Area (151,410 acres) as identified in RARE II analysis.
Location	Adjacent to the west side of the Cloud Peak Wilderness in Big Horn County, Wyoming. Primary access is available through the Battle Park Road (FR 24), the Buck Creek Road (FR 360), the Paintrock Road (FR 17), the Cold Springs Road (FR 344), the Long View Road (FR 432112), and the Whaley High Cabin Road (FR 321). Numerous trails originate along roads on the west side, and pass through the roadless area into destinations in the Cloud Peak Wilderness. The Middle Paintrock Trail (FT 066), the Edelman Trail (FT 025), Main Paintrock Trail (FT 349), North High Park Trail (FT 059), and the Long Park Trail (FT 164) are some of the popular trails in the area.
Surroundings	North Trapper Creek forms the north boundary, South Paint Rock Creek is along the south boundary, and several creeks, roads, and the Forest boundary define the west side. Cloud Peak Wilderness is contiguous with the east boundary of this roadless area.
Physical and biological description	<p>Area elevations range from 6,700 feet where Paint Rock Creek leaves the Forest boundary, to 11,321 feet atop Elk Mountain. The area is characterized by subalpine forests bordered by the granitic mountain peaks of the Cloud Peak Wilderness. The forests feature a mixture of lodgepole pine, Engelmann spruce and subalpine fir stands and an understory of grouse whortleberry. Along the boundary of the Cloud Peak Wilderness, glacial moraines and tertiary terraces with sparsely vegetated soils withstand the harsh climate. Surface boulders are common on glacial soils and at higher elevations.</p> <p>Large expanses of grass/shrub steppe are located in the southwest region where the terrain is roughly broken, dissected by numerous drainages, and ranges in character from flat open parks and rolling valley floors to steep slopes and high ridges. Idaho fescue, big sagebrush, silky lupine comprise the natural vegetation. In flood plains and alluvial depressions, willows and rushes are present in the wetter areas. Several streams drain the open range region, forming deep, dark canyons lined with Douglas fir and Engelmann spruce near the Forest boundary.</p>
Features	Cool, subalpine forests of lodgepole pine, Engelmann spruce, subalpine fir, and grouse whortleberry are complimented by large expanses of grassland-shrub steppe in the southwest. Battle Park, the Buck Creek V's, and Bellyache Flats are key features in the open range landscape. Dutch Oven Pass and Iron Mountain are landmarks in the north. Views into the canyons, the Big Horn Basin and glimpses of the peaks in the Cloud Peak Wilderness offer a range of vistas from certain locations.

Resource Uses

Vegetation

Vegetation is comprised of 25% lodgepole pine, 21% spruce-fir, 12% Douglas fir, 2% aspen, 25% grass/forb, 9% sagebrush, and the remainder is non-vegetated. Sagebrush stands in the area have been treated with prescribed fire to increase production and diversity of native grasses and forbs, and improve forage for livestock and wildlife. Timber sale harvest units from the 1950s, 1970s, and 1990s are located east of Spanish Point. Although aspen is not a major component of Bighorn National Forest vegetation, one of the largest stands of this species occurs in the vicinity of Cement Mountain and the Middle Fork of Paint Rock Creek.

Recreation

The majority of recreational use involves hiking, horseback riding, fishing, and hunting activities. Numerous trails are scattered throughout the area, many of which access the Cloud Peak Wilderness. The popular Long Park Trail (FT 164), located in the southern end of the roadless area, is a non-motorized trail that leads to Grace Lake and then on to Lake Solitude in the Cloud Peak Wilderness. The Edelman Trail (FT 025) originates in the north near the Paint Rock Lakes, and traverses west over the Big Horn divide to the east boundary of the Cloud Peak Wilderness. Several trails are designated for ATV, motorcycle, and snowmobile use. The Battle Park Trailhead receives concentrated use by horseback riders and ATV users. Likewise, during fall big game seasons, there are numerous hunting camps and a high volume of use in the Battle Park area. The Buck Creek V roads have been recently converted to motorized trails. There is full size vehicle access permitted to the Buck Creek Cow Camp.

The Paint Rock Lakes region receives moderate recreation activity in the summer, with heavy use occurring during the fall hunting seasons. Anglers frequent the area lakes and streams for Yellowstone cutthroat, brook, brown, and rainbow trout.

Groomed snowmobile trails can be found along the west boundary and one trail segment travels through the interior of the area near Battle Park (State snowmobile trail "P"). These trails receive heavy use during the winter months, where travel to and from area lodges constitute popular travel routes. Open terrain is used for off-trail snowmobile play, and there is some trespass into the wilderness. Several outfitter-guide permits are issued for summer trail rides and fall hunting. The ROS rating is approximately 70% Semi-Primitive Motorized, with the remainder in Semi-Primitive Non-Motorized recreation.

Wildlife

Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, pikas, beaver, ground squirrels, and grouse also inhabit the area. The area includes summer habitat for deer and elk, and suitable year-long habitat is available near the Forest boundary. There are large elk calving and nursery areas in the vicinity of Battle Park, Iron Mountain, and the Medicine Lodge drainage. A number of streams and small lakes support fishable populations of cutthroat, brook, brown, and rainbow trout. Mill and Dry Medicine Lodge Creeks harbor

ROADLESS AREA MANAGEMENT

populations of genetically pure Yellowstone cutthroat trout (*Oncorhynchus clarki bouveri*). The Mill Creek population is a potentially unique Yellowstone cutthroat population. Two occurrences of the water vole (*Microtus richardsoni*), a Forest sensitive species, have been documented near Lower Paint Rock Lake. The American marten (*Martes americana*), a Forest sensitive species, has been observed near Lower Paint Rock Lake.

Range	There are several active cattle/horse and sheep allotments in the area. Typical range improvements such as fences, water developments, pipelines and cow camps, are in and adjacent to the roadless area.
Water	The area is contained within the Trapper Creek, Dry Medicine Lodge, North Fork Paintrock Creek, and Middle/South Forks Paintrock Creek watersheds. Streams in the area are in a natural free-flowing state and are not located within a municipal watershed. Principal features include Upper Paint Rock Lake, Lost Lake, Grace Lake, Dry Medicine Lodge Creek, North/South Trapper Creeks, Trout Creek, and North, Middle and the main stems of Paintrock Creek.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.
Heritage resources	There is a ceremonial site within roadless area. There is potential for additional historic and prehistoric sites in this area.
Fire	The Paintrock Basin Fire burned 237 acres in the southwest portion of the area in 1910. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement. The sagebrush/grassland areas of the unit are subject to high severity fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of the plants.
Other	Several developed recreation sites are along the west boundary of the area. Cloud Peak Biological Area is adjacent to the east side of the roadless area, and follows the approximate wilderness boundary. BLM lands are adjacent to the southwest boundary, and the agency has recommended Paint Rock Creek for Wild and Scenic designation. The Cloud Peak Wilderness is contiguous with the east boundary of this roadless area.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... med

Solitude opportunities are moderate due to the high volume of use at Paint Rock Lakes and Battle Park trailhead. The Cloud Peak Wilderness borders the east side of the area.

Natural and free from disturbance med

The area is largely natural in appearance, with the exception of grazing uses and improvements. Motorized trails cause disturbance in certain locations.

Challenge med

The area offers a moderate degree of challenge due to the relatively accessible terrain.

Primitive and unconfined recreation med

Hunting, horseback riding, fishing, and hunting are the primary uses.

Environmental and special features high

This area offers a moderate level of opportunity for outdoor education and environmental study. There are opportunities to study subalpine and alpine ecosystems and glacier-affected land forms. Several sensitive species of mammals occur here and genetically pure strains of Yellowstone cutthroat trout are found in Mill Creek and Dry Medicine Lodge Creek. The scenic features are rated high, with subalpine forest, streams and lakes, and views of the granite peaks of the Cloud Peak Wilderness.

Manageability med

Manageability of the area varies somewhat by location – much of the west side is defined by streams and roads, but there are less obvious boundaries in the north. Conflicts may arise near roads and motorized trails. The Cloud Peak Wilderness is contiguous along the east side of the roadless area. This area represents the transition zone between the roaded and developed Forest and the Cloud Peak Wilderness.

Conclusion: The established motorized use in this area and the manageability restricts it to the low range of capability; however it will be considered **Capable** for wilderness and it will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? Yes
The area supports summer and winter motorized recreation.
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? No

Conclusion: Based on the established motorized use in the area, this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Cloud Peak Contiguous West roadless area (45,245 acres).

Table C-41. Management prescriptions by alternative for the Cloud Peak Contiguous West Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.32		18,381	18,398	8,371	16,704	
1.33					2,894	
2.1		12,091	14,741			
3.24	136					
3.31	90	3,498	9,445	3,154	150	55
3.4		1,761	1,761			
3.5	19,550					
4.2	118					
4.3				3,300	1157	118
5.11	5,418	3,082	900	11,318		26,956
5.12	15,291	3,085		19,004	21,771	
5.13	4,642	36		98	98	18,116
5.4		3,311			1,470	
5.5					1001	

The following table summarizes the Cloud Peak Contiguous West roadless area acreage by alternative for the groups shown above.

Table C-42. Estimated acres retaining and not retaining roadless character for the Cloud Peak Contiguous West (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	39,252	42,166	42,558	40,406	42,637	34,402
Acres Not Retaining Roadless Character	5,993	3,079	2,687	4,839	2,608	10,843

Roadless Area B042 – Medicine Lodge

Acres	7,572
Ranger District	Medicine Wheel/Paintrock
History	This area was originally part of the #02031 Cloud Peak Contiguous Roadless Area (151,410 acres) as identified in RARE II analysis.
Location	The area is located approximately 14 air miles east of Greybull, Wyoming in Big Horn County. Primary access is provided by the Paintrock Road (FR 17), Cold Springs Road (FR 344), Bear Mountain Road (FR 355), and Captain Jack Road (FR 431311). Lower Medicine Lodge Trail (FT 354) and Black Butte Trail (FT 180) are the only designated trails in the area.
Surroundings	The area is surrounded along the north, south and east boundaries by Forest roads. The Forest boundary forms the west side, and the roadless area is contiguous to the Medicine Lodge Wilderness Study Area, administered by the Bureau of Land Management. Medicine Lodge Lakes are located in the northeast corner.
Physical and biological description	Elevations range from 6,700 feet where Medicine Lodge Creek leaves the Forest boundary to 9,300 feet. The area contains a wide variety of vegetation and landforms, ranging from lower elevation Douglas fir forests and sagebrush basins, to cooler, moist slopes of Engelmann spruce. Upper and Lower Medicine Lodge Lakes are located on glacial moraines adjacent to the uplifted granitic core of the Big Horn Mountains. Medicine Lodge Creek winds through lodgepole pine and spruce fir forests, gradually losing elevation through a transition from glacial terraces to sedimentary landforms as it leaves the Forest boundary and forms Medicine Lodge Canyon.
Features	Medicine Lodge Creek flows along the north boundary of the area and develops into a rugged canyon as it leaves the Forest boundary on the west. Upper and Lower Medicine Lodge Lakes are fishing and camping destinations. The range in elevation and accompanying vegetation types provide for a varied and attractive landscape.

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Resource Uses

Vegetation	Comprised of 28% Douglas fir, 23% spruce-fir, 23% lodgepole pine, 12% sagebrush, 9% grass/forb, and the remainder is non-vegetated. Vegetation is largely natural and features diverse communities of dry, low elevation sites of Douglas fir and mountain ninebark to cooler, north-facing slopes of Engelmann spruce and grouse whortleberry. There are several timbered areas along the boundary that were thinned as well as areas that were seeded with Douglas fir. Old timber harvest units are located to the southwest of Bear Mountain. Some of the riparian areas show impacts from grazing and exotic species are present.
Recreation	The area receives light recreational use in the form of hiking, horseback riding, and fishing. Upper and Lower Medicine Lodge Lakes are popular fishing spots. The Paintrock Resort (aka Paintrock Lakes Lodge) and 3 small campground facilities are nearby at Medicine Lodge and Paintrock Lakes. Two trailheads that lead to destinations in the Cloud Peak Wilderness are located in the Medicine Lodge and Paint Rock Lakes area. The Black Butte Trail (FT 180) extends from Black Butte to Bear Mountain and is open to snowmobile use. Big game hunting pressure in the fall is moderate to heavy, with hunting activity concentrated along the Paintrock Road (FR 17). A groomed snowmobile trail follows the east and north boundaries of the area. Approximately one half of the area is rated for ROS as Semi-primitive Motorized, and the remainder is Semi-primitive Non-motorized and Roded Natural (in the vicinity of Upper Medicine Lodge Lakes).
Wildlife	Big game species within the area include elk, deer, mountain lion, and black bear. Small game species include sage grouse and blue grouse. Various birds, raptors, small mammals, and furbearers are found in the area including yellow-bellied marmot, beaver, and golden eagle. The area provides spring calving, summer, fall, and critical winter habitat for elk and deer. Medicine Lodge Lakes offer anglers the opportunity to catch brook, rainbow, Eagle Lake rainbow, and lake chub. Just outside the area boundary, two occurrences of the water vole (<i>Microtus richardsoni</i>), a Forest sensitive species, have been documented near Lower Paint Rock Lake. The American marten (<i>Martes americana</i>), a Forest sensitive species, has been also been observed near Lower Paint Rock Lake.
Range	The area is used for grazing livestock and is located within the Forks and Trapper Cattle and Horse Allotments. Typical range improvements such as fences, water developments, and cow camps are located within and adjacent to the area.
Water	Medicine Lodge Creek, Upper and Lower Medicine Lodge Lakes are the principal features in the area that are part of the Medicine Lodge Creek watershed.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.

Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	There is no recorded fire history for the area. Fires in the Douglas fir cover type typically burn with mixed severity, with some areas burning in the understory and some transition to the crowns of trees for short durations. This regime group has the potential for large fires, particularly if strong winds are present. The areas of sagebrush/grassland areas of the unit are subject to high severity fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of the plants.
Other	This area is contiguous on the west boundary to the recommended Medicine Lodge Wilderness, a 3,600-acre Bureau of Land Management unit. The State of Wyoming administers Medicine Lodge Big Game Winter Range outside the Forest boundary to the west. This area is adjacent to the 7,740-acre BLM Medicine Lodge Wilderness Study Area (#WY010-240) of which 3,600 acres are recommended for wilderness designation. Cloud Peak Contiguous West Roadless Area lies a short distance to the east.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude high

The area generally provides very high opportunities for solitude.

Natural and free from disturbance med

The area is largely natural and undeveloped, with the exception of some past timber harvest units. There is a minimal amount of seasonal disturbance created by hunting and snowmobiling. Use of adjacent roads and incursions on non-system trails causes disturbance.

Challenge med

Primitive and unconfined recreation med

Hunting, horseback riding, and fishing are the primary activities for the area. Some unauthorized motorized use of non-system routes occurs in the Allen Draw and Bear Mountain areas.

Environmental and special features high

The area offers a moderate level of opportunity for outdoor education and environmental study. The scenic features are rated high, with extensive views, sedimentary and granitic landforms, and diverse plant communities.

ROADLESS AREA MANAGEMENT

Manageability high

Travel routes on three sides define the boundaries. The area is contiguous with the 7,740 acre BLM Medicine Lodge Wilderness Study Area (#WY010-240), of which 3,600 acres has been recommended for wilderness designation. The developed recreation sites (resort, lakes, campgrounds) along the east side present a challenge for administration and management. Protection of lakeshores with fishing is difficult to manage in designated wilderness.

Conclusion: The natural character of the landscape, the high opportunities for solitude, and its location next to adjoining primitive federal land, make the area **Capable** for wilderness. It will be further evaluated for availability and need.

Availability Determination

- | | |
|---|----|
| 1. Is the area vitally needed for increased water protection and storage? | No |
| 2. Would wilderness designation seriously restrict important wildlife management? | No |
| 3. Does the area have high strategic or economic mineral development potential? | No |
| 4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? | No |
| 5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? | No |
| 6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? | No |

Conclusion: Based on the resource potentials and management considerations described above, this area has been determined to be **Available** for wilderness.

Need Determination

Nearby Wilderness: The roadless area lies approximately one mile west of the Cloud Peak Wilderness. This roadless area is contiguous to roadless and undeveloped areas in other federal ownerships that have identified wilderness potential (i.e., the Bureau of Land Management has recommended the 3,600 acre Medicine Lodge Wilderness Study Area for wilderness designation). An additional 4 million acres of wilderness occurs in the state of Wyoming.

Wildlife Needs: Just outside the area boundary, two occurrences of the water vole (*Microtus richardsoni*), a Forest sensitive species, have been documented near Lower Paint Rock Lake. The American marten (*Martes americana*), a Forest sensitive species, has also been observed near Lower Paint Rock Lake. No species have been identified in the Medicine Lodge area that require a wilderness environment for survival.

Cover Type: In comparison of the occurrence of various ecosystem types in nearby wilderness areas, the alpine and subalpine ecosystem types are well represented. Medicine Lodge Roadless Area consists of sedimentary breaklands and mountain slopes with lower elevation ecosystems

including Idaho fescue, Douglas-fir, and mountain shrub communities. These communities are not well-represented in Wyoming wilderness areas.

The following table displays percentage of the cover types represented in this roadless area.

Table C-43. Percent of cover types in the Medicine Lodge Roadless Area.

Cover Type	Acres	Percent
Forb	273	4
Grass	391	5
Bare	105	1
Rock	-	-
Shrub	137	2
Sagebrush	893	12
Willow	18	-
Aspen	98	1
Cottonwood/willow	-	-
Douglas fir	2,090	28
Limber pine	99	1
Lodgepole pine	1,762	23
Ponderosa pine	-	-
Pinyon-juniper	-	-
Spruce-fir	1,706	23

Limited Representation Cover Types: Certain cover types identified above have limited representation in the Rocky Mountain Region wilderness system. The following table identifies those limited cover types in the Medicine Lodge Roadless Area and shows the percentage of total capable/available roadless it represents on the Bighorn National Forest.

Table C-44. Limited representation cover types in the Medicine Lodge Roadless Area.

Cover Type	Acres in Medicine Lodge Roadless Area	Percent of Total Bighorn NF Capable/Available Roadless
Ponderosa pine	-	-
Douglas fir	2,090	3
Lodgepole pine	1,762	3
Big sagebrush	893	6
Pinyon-juniper	-	-
Aspen	98	3
Grass	391	2
Limber pine	99	1

Public Comment: Locally elected officials are not supportive of wilderness recommendation for the area.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Medicine Lodge roadless area (7,572 acres).

Table C-45. Management prescriptions by alternative for the Medicine Lodge Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.2			5,672			
1.32	3,427			2,798	3,452	848
1.33		4,669				
3.31			1,368			
3.5	210					
4.2	187					
4.3				883	1,236	187
5.11	288	2,903	532	3,766		
5.12	1,528					
5.13	1,932			125		4,662
5.4						1,875
5.5					2,884	

The following table summarizes the Medicine Lodge roadless area acreage by alternative for the groups shown above.

Table C-46. Estimated acres retaining and not retaining roadless character for the Medicine Lodge Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	6,724	6,991	7,329	6,693	5,873	5,873
Acres Not Retaining Roadless Character	848	581	243	879	1,699	1,699

Roadless Area B043 – Tongue River

Acres	17,297
Ranger District	Tongue
History	This area was originally part of the #02020 Little Bighorn Roadless Area (134,760 acres) as identified in RARE II analysis.
Location	The area is located approximately 3 air miles southwest of Dayton, Wyoming in Sheridan County. Primary access is provided by US Highway 14, Skull Ridge Road (FSR 151), Sheep Creek Road (FSR 198), and Freeze Out Cow Camp Road (FSR 199). Non-motorized access is available through the Tongue River Canyon Trail (FST 002). The Horse Creek Trail (FST 159) is open to motorized use and intersects the Tongue River Canyon Trail.
Surroundings	The area is bounded on the north and west by roads, the Forest boundary forms the east boundary, and the south boundary follows utility lines, roads, State land, and timber harvest units.
Physical and biological description	<p>Steep canyons dissecting open, rolling plateaus characterize the area. The Tongue River winds its way through upper elevation plateaus and ridges, gradually descending through a deep gorge in the limestone front range before leaving the Forest boundary. Scenic canyons walls feature exposed Madison and Amdsen formations of red shale and gray limestone.</p> <p>Elevations range from 4,600 feet in the northeast corner of the area where the Tongue River leaves the Forest boundary, to 8,321 feet at the top of Skull Ridge. Ponderosa pine forests are present at elevations from 4,600 to 6,000 feet on the eastern slope of the area. Lodgepole pine stands replace ponderosa as elevations exceed 6,500 feet on soils of granitic origin. Small stands of Engelmann spruce-subalpine fir are on north and east aspects in the higher elevations. Open sideslopes and ridges consisting of big sagebrush and Idaho fescue can be found in the upland areas.</p>
Features	Dominant visual features in this unit are the Tongue River, Tongue River Canyon, Steamboat Point, and the rugged Box Canyon. Twin Buttes is a landmark feature in the landscape. Portions of the Tongue River are recommended for wild/scenic/recreational designation and provide excellent hiking and fishing opportunities. Tongue River Cave has been nominated as a “significant” cave under the 1988 Federal Cave Resources Protection Act.
Resource Uses	
Vegetation	Vegetation is comprised of 40% lodgepole pine, 15% ponderosa pine, 9% aspen, 5% spruce-fir, 6% Douglas fir, and the remainder is composed of grass/forb/sagebrush communities. Prescribed fire has been used in the area between the Tongue River and Horse Creek Ridge on ponderosa pine to reduce conifer encroachment in meadows, enhance species diversity, and improve wildlife forage through regeneration of shrubs and grasses. Sagebrush and aspen stands have been treated with prescribed fire to stimulate

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regeneration, increase plant vigor and improve forage for wildlife. An ecological evaluation was conducted on the area and determined that 7% of the grassland/shrub vegetation is comprised of exotic plants.

Portions of the forested areas near Horse Creek Ridge and Tongue River Canyon are experiencing high mortality due to mountain pine beetle infestations and white pine blister rust. The Twin Nickel and Nickle Creek timber sales have taken place outside the area along the southwest boundary. Logging occurred in forested portions of the area during the tie hack era.

Recreation

The majority of recreational use involves hiking, horseback riding, mountain biking, fishing, photography, bird watching, and hunting. Drier, milder conditions occur along the eastern portion of the area, which extend the recreation seasons along the popular Tongue River Canyon Trail. Caving in Tongue River Cave, climbing of canyon walls, and off-trail hiking are popular activities in the canyon. There are dispersed campsites along the hiking trails in the area. The Tongue River is classified as a Class I fishery by the Wyoming Game and Fish Department and is frequented by anglers seeking rainbow, brook, and brown trout. The Horse Creek Ridge Trail (FT 159) is authorized for motorized recreation and is used by ATVs. Big game hunting pressure in the fall is moderate, with hunters accessing the area from the Skull Ridge Road (FSR 151). There are outfitter/guide permits authorized for black bear near the confluence of the Tongue and North Tongue Rivers.

Other special uses include the Bighorn Wild and Scenic Run - a competitive trail run that includes the Tongue River Canyon Trail (FT 002) and the Horse Creek Ridge Trail (FT 159). The annual 2-day event takes place in June and features 30 kilometer, 50 kilometer, 50 mile, and 100 mile events that traverse other roads and trails on the Forest. The ROS rating for the area includes approximately 70% in Semi-Primitive Motorized, 25% Semi-Primitive Non-Motorized, and the remainder is Roded Natural.

Wildlife

The river corridors provide important habitat for many terrestrial and aquatic wildlife species. The riparian areas serve as feeding and nesting sites for birds and canyon walls offer potential nesting habitat for peregrine falcons. The area includes summer habitat for deer, elk and moose, and is used as a migratory route into winter range in the adjoining Amsden Creek Big Game Winter Range (State of Wyoming unit). A variety of trout are found in the Tongue and North Tongue Rivers including rainbow trout, brook trout, brown trout, Snake River cutthroat, Yellowstone cutthroat trout, and various hybrids. Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*), a Forest sensitive species, have been stocked in the North Tongue River by the Wyoming Game and Fish Department, but there is no evidence of a naturally reproducing population there. Several sensitive species of bats, including Townsend's big-eared bat (*Corynorhinus townsendii*) and fringed myotis (*Myotis thysanodes*) roost in canyon walls and in Tongue River cave.

Range

Several active cattle and horse allotments are in the area, including range improvements such as fences and water developments.

Water	The Tongue and North Tongue Rivers (and tributaries) are located within the Tongue Municipal Watershed that supplies drinking water to the communities of Dayton and Ranchester. The watershed also supplies irrigation water to agricultural lands off the Forest. The Tongue River was recommended for Wild/Scenic/Recreational designation in the 1985 Forest Plan.
Minerals	There is a 280 acres reserved for mineral/oil/gas rights in private ownership in T56N, R88W, Sections 23 and 24. Roughly 40 acres of the encumbrance is located in the roadless area. There is a leopard rock quarry located at the end of FR 152117 that is a popular site for collection of rock for landscape and decorative purposes. There are no withdrawals and the area is considered to have low mineral and no oil/gas potential.
Heritage resources	The Tongue River contains remnants of a tie flume from the late 1800s. There are several ceremonial sites and prehistoric/historic travel routes in and adjacent to the unit. The presence of these sites in the region indicates high potential for other eligible heritage resources in the area.
Fire	<p>A small area in the northeast corner of the unit was burned by a historic wildfire (1917) known as the Tongue River Fire.</p> <p>The ponderosa pine fire regime is characterized historically by frequent, low-intensity fires that burn the understory, keeping mature stands open and park-like. The lodgepole pine habitat typically experiences a high-intensity burn regime that results in stand replacement. The sage/grassland areas of the unit are subject to high severity fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of the plants.</p>
Other	Amsden Creek Big Game Winter Range, administered by the State of Wyoming, borders the unit in the northeast corner of the area. The State of Wyoming also administers Tongue River Campground, located just outside the area's northeast boundary. Several privately owned residences are located along the river in Tongue River Canyon outside the Forest boundary. State school lands along US 14 border the south edge of the unit. Highway reconstruction along US 14 is currently planned along the area boundary.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude high

Opportunities for solitude are rated high in most of the area, with moderate rating along the popular Tongue River Trail and adjacent to Highway 14. Wild river recommendation describes a core area of solitude.

Natural and free from disturbance med

The area is modified in appearance by grazing of domestic livestock, range improvements, and approximately 7% of the area is impacted by exotic plant species.

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Challenge med

The area offers a moderate degree of challenge, with a hiking trail through the rugged portion of the canyon country.

Primitive and unconfined recreation..... med

There is a good variety of backcountry recreation – hiking, fishing, backpacking, photography, horseback riding. An annual competitive trail run is a non-conforming use in the core of the area.

Environmental and special features high

This area offers a high degree of opportunity for outdoor education and environmental study. Tongue River canyon is an excellent example of sedimentary geology and Tongue River cave offers environmental education opportunities in cave formation and cave resources. The scenic features of the area are considered outstanding due to the steep canyons, extensive views, and the sedimentary geology. Historic values are high with remnants of a circa-1900s tie flume present along the Tongue River. The river corridors are inhabited by a wide variety of terrestrial and aquatic wildlife species.

Manageability med

This area has a moderate level of manageability. Boundary lines along the north and south are common between State and Forest Service jurisdictions. Subsurface ownership, an established competitive event, and highway reconstruction present management obstacles.

Conclusion: The high opportunities for solitude, its unique environmental features, and good recreation opportunities result in the area to be considered **Capable** for wilderness. It will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? No
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? Yes

There are 280 acres reserved for private ownership of subsurface minerals, oil, and gas resources that are partially contained within the roadless area.

There has been recurring highway construction of Highway 14.

Conclusion: Based on the subsurface ownership of minerals and nonconforming uses (competitive trail run), this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Tongue River roadless area (17,297 acres).

Table C-47. Management prescriptions by alternative for the Tongue River Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.31				6,007	804	6,286
1.32	3,554					
1.5		6,638	6,791		4,638	
3.31			7,085			
3.4	7,704				2,778	
3.5	2,904	7,237		2,230	1,845	
4.2	189	1,246	1,246	1,297	957	
4.3				1,592		
4.4		1,950	1,949		1,956	
5.11	712	226	226	6,171	3,892	3,273
5.12	798					
5.13	12				427	
5.4						266
5.41	1,424					1,892
5.5						5,580

The following table summarizes the Tongue River roadless area acreage by alternative for the groups shown above.

Table C-48. Estimated acres retaining and not retaining roadless character for the Tongue River Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	16,287	16,084	16,099	15,421	15,680	15,392
Acres Not Retaining Roadless Character	1,010	1,213	1,198	1,876	1,617	1,905

Roadless Area B044 – Lodge Grass Creek

Acres	11,935
Ranger District	Medicine Wheel/Paintrock
History	This area was originally part of the #02020 Little Bighorn Roadless Area (134,760 acres) as identified in RARE II analysis.
Location	The area is located in the along the Wyoming-Montana state line in the extreme northern edge of the Forest. Primary access is provided by Sheep Mountain Road (FR 11), Marble Quarry Road (FR 111), and Lodge Grass Cow Camp Road (FR 101). Lodge Grass Trail (FT 061) follows Lodge Grass Creek through the area.
Surroundings	The Wyoming-Montana state line forms the north boundary, the Sheep Mountain Road (FR 11) runs along the area's west side, and the Marble Quarry Road (FR 111) runs along the east and south boundaries. The Crow Indian Reservation is located outside the northern boundary in Montana. Little Bighorn Roadless Area is located immediately to the southeast.
Physical and biological description	Elevations range from approximately 6,300 feet where Lodge Grass Creek exits the National Forest, to 9,200 feet along the ridge below Sheep Mountain. Lodge Grass Creek enters the southwest corner of the area and runs north through forested regions of Engelmann spruce-subalpine fir stands. As the creek continues north and loses elevation, it emerges from the forested region into an open, rolling grassland plateau surrounded by steep ridges and escarpments. The parks and ridges contain big sagebrush, bluebunch wheatgrass, and Idaho fescue on the upland areas, and are interspersed with forested stands of Douglas fir, limber pine, and juniper in the lower elevations. Lodge Grass Creek flows through a deep valley leading into a canyon environment as it leaves the Forest, before joining the Little Bighorn River in Montana.
Features	Lodge Grass Creek is the dominant feature in the area. Sheep Mountain is located just outside the southwest corner of the unit.
Resource Uses	
Vegetation	Vegetation is in a natural condition and is comprised of 34% spruce-fir, 21% Douglas fir, 8% limber pine, 22% grass/forb, 3% sagebrush; the remainder is non-vegetated. Lodge Grass Timber Sale harvest units (1986) are outside the east boundary of the unit on the east side of Lodge Grass Creek.
Recreation	The majority of recreational use is light and involves hiking, horseback riding, fishing, and hunting activities. Lodge Grass Creek Trail (FT 061) follows Lodge Grass Creek through the roadless area. Although open to motorized travel, the rough terrain along the trail limits the use of ATVs or motorcycles. There are outfitter-guide permits authorized for fall hunting and black bear baiting along the Marble Quarry Road (FR 111). The ROS includes approximately 75% Semi-Primitive Motorized, and the remainder is Semi-

	Primitive Non-Motorized and Roaded Natural.
Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, beaver, ground squirrels, and grouse also inhabit the area. The area provides spring calving, summer, and fall habitat for elk and deer. There are rainbow trout, cutthroat trout, and hybrids in Lodge Grass Creek. A segment of Lodge Grass Creek harbors a genetically pure population of Yellowstone cutthroat trout. Yellowstone cutthroat trout (<i>Oncorhynchus clarki bouveri</i>), a Forest sensitive species, are present in physically isolated stream reaches, but their specific origin is unknown. The roadless area is contained within the Porcupine/Mann Creek lynx analysis unit. The Canada lynx (<i>Lynx canadensis</i>) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act, however, the presence of lynx has not been documented on the Forest.
Range	Livestock grazing is the predominant resource use in the area and typical range improvements such as fences, stock ponds, and cow camps are located in and adjacent to the area.
Water	Lodge Grass Creek, Line Creek and their tributaries are the primary streams that drain the area into the Upper Little Bighorn River watershed.
Minerals	There are no active mineral claims and the area is considered to have low mineral and no oil/gas potential.
Heritage resources	There are several ceremonial sites and a travel route adjacent to the unit. The presence of a nearby prehistoric/historic travel corridor indicates high potential for other eligible heritage resources in the area.
Fire	<p>There has been an active fire history in the unit with numerous large and small fires occurring over a span of 10 years. The Lodge Grass fire (1919) consumed 288 acres, the Red Springs fire (1919) burned 75 acres, and an unnamed fire in 1930 burned 5,963 acres. The largest burn area was the Crow Reservation fire (1921), which extended into Montana and totaled 18,321 acres.</p> <p>The Engelmann spruce-subalpine fir habitat type has a historical fire interval of 100+ years and experiences stand replacement severity burning. The Douglas fir, limber pine and juniper areas are in a regime of mixed severity, with some areas burning in the understory and some transition to the crowns of trees for short durations. The sagebrush/grassland areas of the unit are typically subject to high severity fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of the plants.</p>
Other	The Crow Indian Reservation is adjacent to the north boundary of this unit, along the Wyoming-Montana border.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude..... high

The area is remote and offers excellent opportunities for solitude.

Natural and free from disturbance high

The area possesses a high degree of naturalness. There is some seasonal disturbance from livestock grazing/trailing and hunting in the fall.

Challenge med

Primitive and unconfined recreation..... med

Environmental and special features med

Lodge Grass Creek harbors a population of genetically pure Yellowstone cutthroat trout.

Manageability high

The north boundary is the Forest boundary along the Wyoming/Montana state line. The remainder of the boundary follows roads.

Conclusion: This area lies in the moderate to high range of capability. It will be considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

- | | |
|---|----|
| 1. Is the area vitally needed for increased water protection and storage? | No |
| 2. Would wilderness designation seriously restrict important wildlife management? | No |
| 3. Does the area have high strategic or economic mineral development potential? | No |
| 4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? | No |
| 5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? | No |
| 6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? | No |

Conclusion: Based on the resource potentials and management considerations described above, this area has been determined to be **Available** for wilderness.

Need Determination

Nearby Wilderness: The roadless area lies approximately 30 miles from the Cloud Peak Wilderness. An additional 4 million acres of wilderness occurs in the state of Wyoming.

Wildlife Needs: Yellowstone cutthroat trout (*Oncorhynchus clarki bouveri*), a Forest sensitive species, are present in physically isolated reaches of Lodge Grass Creek. No species have been identified in the Lodge Grass Creek area that require a wilderness environment for survival.

Cover Type and Landform: In comparison of the occurrence of various ecosystem types in nearby wilderness areas, the alpine and subalpine ecosystem types are well represented. Lodge Grass Creek Roadless Area features a lower elevation ecosystem of Douglas fir forests, meadows, and streams, to cooler Engelmann spruce fir forests at higher elevations. The lower elevation ecosystem is not well represented in the Wyoming wilderness system.

The following table displays percentage of the cover types represented in this roadless area.

Table C-49. Percent of cover types in the Lodge Grass Creek Roadless Area.

Cover Type	Acres	Percent
Forb	867	7
Grass	1,731	15
Bare		
Rock	1,180	10
Shrub	88	1
Sagebrush	324	3
Willow		
Aspen	140	1
Cottonwood/willow		
Douglas fir	2,555	21
Limber pine	955	8
Lodgepole pine	3	-
Ponderosa pine		
Pinyon-juniper		
Spruce-fir	4,092	34

Limited Representation Cover Types: Certain cover types identified above have limited representation in the Rocky Mountain Region wilderness system. The following table identifies those limited cover types in the Lodge Grass Creek Roadless Area and shows the percentage of total capable/available roadless it represents on the Bighorn National Forest.

Table C-50. Limited representation cover types in the Lodge Grass Creek Roadless Area.

Cover Type	Acres in Lodge Grass Creek Roadless Area	Percent of Total Bighorn NF Capable/Available Roadless
Ponderosa pine		
Douglas fir	2,555	4
Lodgepole pine	3	-
Big sagebrush	324	2
Pinyon-juniper		
Aspen	140	4
Grass	1,731	8
Limber pine	955	9

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Lodge Grass roadless area (11,935 acres).

Table C-51. Management prescriptions by alternative for Lodge Grass Creek.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.33	14	9,921	9,921	14		
3.5	4,811		2,014			
5.11	904			10,903	11,033	1,563
5.12	4,817	2,014		1,018	902	9,399
5.13	1,389					973

The following table summarizes the Lodge Grass Creek roadless area acreage by alternative for the groups shown above.

Table C-52. Estimated acres retaining and not retaining roadless character for Lodge Grass Creek (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	10,375	11,734	11,734	9,653	9,638	10,391
Acres Not Retaining Roadless Character	1,560	201	201	2,282	2,297	1,544

Roadless Area B045 – Cookstove Basin

Acres	7,274
Ranger District	Medicine Wheel/Paintrock
History	Originally part of the #02021 Devils Canyon Roadless Area (34,280 acres) as identified in RARE II analysis.
Location	The area is located along the Wyoming-Montana state line in the extreme northeast corner of the Forest in Big Horn County, Wyoming. Primary access via Sheep Mountain Road (FR 11), Steel Granary Road (FR 104), State Line Road (FR 647), and Cookstove Basin Road (FR 103). Access is also available through Bureau of Land Management land near Trout Creek.
Surroundings	The Wyoming-Montana state line forms the north boundary, the Sheep Mountain Road (FR 11) runs along the area's east side, and the Steel Granary Road (FR 104) forms the south boundary. Cookstove Basin Road (FR 103) runs partway through the area's midsection and forms two "thumbs" in the unit. The Forest boundary is located on the area's west side and the Crow Indian Reservation is located outside the north boundary in Montana. The backbone of the Big Horn Mountains lies to the east of the area, and the arid Bighorn Basin drops away to the west.
Physical and biological description	Elevations range from 5,800 feet where Trout Creek leaves the Forest boundary, to 8,958 feet along the area's east boundary. The area features a large southwest facing grassland basin bordered by forested ridges of Douglas fir and limber pine stands at the drier, lower elevations, and Engelmann spruce-subalpine fir stands at more moist, higher elevations. Cookstove Basin, the dominant feature in the landscape, slopes sharply to the southwest to form the drainage for Trout Creek as it exits the Forest. The basin contains big sagebrush and Idaho fescue as the dominant plant community. Mature stands of lodgepole pine and Engelmann spruce-subalpine fir associated with granitic soils occur in the southeast quadrant of the area. These forested areas contain small open parks of Idaho fescue and sedges. Riparian vegetation consists of cottonwoods, willows and sedges in the meadows along Trout Creek.
Features	Dominant features are Cookstove Basin and Trout Creek. Sheep Mountain is visible from certain locations in the area. Trout Creek contains genetically pure Yellowstone cutthroat trout.
Resource Uses	
Vegetation	Vegetation is comprised of 38% Douglas fir, 14% spruce-fir, 14% lodgepole pine, 19% grass/forb, 7% sagebrush, and the remainder is non-vegetated. Some of the uplands and riparian areas show impacts from grazing, and exotic species (Canada thistle) are present along Trout Creek. The exotics have been chemically treated in the 1970s. Decadent sagebrush stands in Cookstove Basin have been treated with prescribed fire to improve livestock/wildlife forage and grazing distribution. The WYNDD contains records for

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populations of Cary beardtongue (*Penstemon caryi*), a Forest sensitive species, for this roadless area.

Recreation

The area is largely natural and undeveloped. Recreation use is light due to the remoteness of the area. Some fishing, hiking, and camping occur in the area. Big game hunting increases activity in the fall, particularly near local roads. Special use permits are authorized for fall hunting. There are no snowmobile, cross country, or hiking trails in the unit. The ROS is Semi-primitive Motorized in the east half of the area and Semi-primitive Non-motorized in the west half.

Wildlife

Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, beaver, ground squirrels, and grouse also inhabit the area. The area provides summer and fall range for big game species, and there is a central core area of suitable habitat for year-round use that extends from Cookstove Basin westward and off Forest. The Cookstove Basin area is a central migration route for elk and used for calving in the spring-early summer season. There is evidence of past beaver activity along Trout Creek, where numerous large pools have been created. Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*), a Forest sensitive species, have been sampled in Trout Creek and subsequent DNA testing revealed the sample to be genetically pure. The roadless area is contained within the Porcupine/Mann Creek lynx analysis unit. The Canada lynx (*Lynx canadensis*) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act, however, the presence of lynx has not been documented on the Forest.

Range

Located solely within the Devil's Canyon Cattle and Horse Allotment, typical range improvements such as fences and water developments are located within the area.

Water

The area contains the headwaters of Trout Creek, which flows westward before leaving the Forest, where it crosses into Montana and meets with Porcupine Creek in Devil's Canyon. The area is within the Bighorn River – Little Dry Creek watershed.

Minerals

Historic placer mining occurred along Trout Creek in the early 1900s, but no significant production resulted from this activity. There are currently no active mining, oil and gas leasing, or mineral claims in this unit. The area is considered to have no oil/gas potential, and low mineral potential, except in a small area along the east boundary, where a moderate mineral potential is noted in the vicinity of several cow camps; however, this area has a recorded withdrawal from mineral entry.

Heritage Resources

There is a ceremonial site and a prehistoric/historic travel route near the unit. The presence of a nearby prehistoric/historic travel corridor indicates high potential for other eligible heritage resources in the area.

- Fire** An unnamed fire burned approximately 165 acres of sagebrush/grassland community in the southwest corner of the unit in 1940.
- A majority of the area is in the Douglas fir habitat type. Fires in this regime group typically burn with mixed severity, with some areas burning in the understory and some transition to the crowns of trees for short durations. The areas of sagebrush/grassland are subject to fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of the plants.
- Other** The Crow Indian Reservation is adjacent to area in Montana. Bureau of Land Management and private lands are along the west boundary.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude med

The area's remote location and distance from major Forest arteries provides good opportunities for solitude, but a road into the center of the area reduces the rating to moderate.

Natural and free from disturbance med

The area is largely natural and undeveloped. There is some disturbance created by the grazing of domestic livestock and associated range improvements. There is a four-wheel-drive road into the center of the area, and a cow camp along the road.

Challenge med

Primitive and unconfined recreation low

While there are few competing uses (grazing), the appeal of this area for primitive recreation use has been considered low.

Environmental and special features med

Trout Creek harbors a population of genetically pure Yellowstone cutthroat trout.

Manageability med

This area has a moderate level of manageability due to federal and private land ownership outside its boundaries, and Cookstove Basin Road (FR 103) provides access into the core of the unit. The small size of the area relative to the limited distance from perimeter to core are factors affecting manageability.

Conclusion: The presence of a road into the core and the area's lack of primitive recreation opportunities result in this area being considered **Not Capable** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Cookstove Basin roadless area (7,274 acres).

Table C-53. Management prescriptions by alternative for the Cookstove Basin Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.32	4,270		6,099			3,023
3.5	821		1,175			
5.11	595					
5.12	1,588	7,274		7,274		3,470
5.13					1,559	
5.4					5,715	781

The following table summarizes the Cookstove Basin roadless area acreage by alternative for the groups shown above.

Table C-54. Estimated acres retaining and not retaining roadless character for Cookstove Basin (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	6,914	6,547	7,156	6,547	5,949	6,810
Acres Not Retaining Roadless Character	360	727	118	727	1,325	464

Roadless Area B046 – Pete’s Hole

Acres	20,302
Ranger District	Medicine Wheel/Paintrock
History	Originally part of the #02027 Horse Creek Mesa Roadless Area (79,620 acres) as identified in RARE II analysis.
Location	Approximately 18 air miles northeast of Lovell, Wyoming in Big Horn County. Primary access via USH 14A, Bald Mountain Rd (FR 122), Bailey Creek Rd (FR 126), Hunt Mountain Rd (FR 10), Dugway Rd (FR 213), Mayland Rd (FR 131), and Pete’s Hole Rd (FR 132). Several motorized trails provide access via Pete’s Hole Trail (FT 104), Beaver Creek Mesa Trail (FT 151), North Beaver Trail (FT 149), East Beaver Trail (FT 420), and Hudson Creek Trail (FT 419).
Surroundings	Bounded on the north by USH 14A, and along the south by Dugway Road (FR 213). The National Forest boundary defines the west boundary and various roads are located along the east boundary. Bureau of Land Management and private lands can be found outside the Forest boundary to the west.
Physical and biological description	Elevations range from 6,000 feet where North Beaver Creek leaves the Forest boundary, to 10,162 feet at the top of Hudson Point along Hunt Mountain. The area contains steep canyons and rocky ridges dominated by forested areas of Douglas fir on steep, dry canyon slopes. Engelmann spruce forests are found in the higher elevations on north and east aspects. The forested areas are interspersed with open parks and ridges consisting of big sagebrush and Idaho fescue on the upland areas. There is a gradual decline in elevation westward from the main ridge of the Big Horn Mountains to the Forest boundary, where the drop off into the Big Horn basin is precipitous.
Features	The rugged terrain and steep canyons above the Big Horn basin are the dominant features of the landscape. Pete’s Hole is a basin near the confluence of Crystal and Roane Creeks, where the drainage drops sharply off the Forest into the Big Horn basin. Hunt Mountain, Medicine Mountain, and Bald Mountain are high points surrounding the roadless area. North and South Beaver Creeks contain genetically pure Yellowstone cutthroat trout.
Resource Uses	
Vegetation	Vegetation is in a natural condition and comprised of 39% Douglas fir, 18% spruce-fir, 13% sagebrush, 14% forb/grass, 4% lodgepole, 2% juniper, and the remainder is non-vegetated. Several areas throughout the unit have been treated with prescribed fire. Sagebrush stands were treated with prescribed fire to increase production and diversity of native grasses and forbs, and improve forage for livestock and wildlife. Some of the uplands and riparian areas show impacts from grazing and exotic species are present.
Recreation	The area receives light recreational use in the form of hiking and horseback riding. Several hiking trails traverse the area, but use is generally light in the

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summer and increases with the hunting season in the fall. Some of the trails are open to motorized recreation, but the rugged terrain limits the practical use of ATVs in the area. Big game hunting pressure in the fall is moderate to heavy, with hunting activity concentrated along the Hunt Mountain Rd (FR 10) and off of spur roads that originate from USH 14A. Groomed snowmobile trails, LL, M, and H follow USH 14A, and portions of the roadless area have become “play areas” for snowmobilers to experience off-trail terrain and the deep powder found in bowls in the Beaver Creek area. Outfitter-guide permits are authorized for fall hunting in the area. The ROS rating is almost entirely Semi-primitive Non-motorized.

Wildlife	Big game species within the area include elk, deer, mountain lion, and black bear. Various birds, raptors, small mammals, and furbearers are found in the area including yellow-bellied marmot, beaver, grouse, and golden eagle. The majority of habitat is used by deer and elk for summer range, while crucial winter range lies along the Forest boundary in the lower elevations. Elk calving and nursery areas can be found west of Hunt Mountain and south of Little Bald Mountain. Populations of Yellowstone cutthroat trout (<i>Oncorhynchus clarki bouvieri</i>), a Forest sensitive species, have been sampled in North and South Beaver Creeks, and subsequent DNA testing revealed the sample to be genetically pure.
Range	The area is used for grazing livestock and is administered under several allotments. Typical range improvements such as fences, water developments, and cow camps are located within and adjacent to the area.
Water	North and South Beaver Creek, Crystal Creek, Cedar Creek, and Whaley Creek drain the area into the Upper/Lower Shell Creek watersheds.
Minerals	Considered to have no oil/gas potential and low mineral potential. Along the northeast boundary of the unit, are several withdrawals from mineral entry.
Heritage resources	There are several ceremonial sites and travel routes adjacent to the unit. The presence of a nearby prehistoric/historic travel corridors indicates high potential for other eligible heritage resources in the area.
Fire	There is no recorded fire history for the area. The Douglas fir habitat type typically burns with mixed severity, with some areas burning in the understory and some transition to the crowns of trees for short durations. The areas of sagebrush/grassland areas of the unit are subject to high severity fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of the plants. There are scattered stands of Engelmann spruce-subalpine fir habitat type along the east boundary of the area. This group has a historical fire interval of 100+ years and experiences stand replacement severity burning.
Other	Bureau of Land Management and private lands are located along the west boundary and provide several access points into the area.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude high

Opportunities for solitude are excellent, with some seasonal impacts occurring during fall hunting and winter snowmobile use in the area.

Natural and free from disturbance high

The area is largely natural and undeveloped. There is some disturbance created by off-trail snowmobiling during the winter season. The sights and sounds of US Highway 14 are evident near area boundaries, but influences are not noticeable in the remote core.

Challenge high

The area offers a high degree of challenge due to rugged terrain, with canyons and large changes in elevation.

Primitive and unconfined recreation med

There is some hiking and horseback riding in the area. The primitive environment is there, but use is light because of the rugged character of the landscape.

Environmental and special features med

The scenic features are rated high, with extensive views, sedimentary geology, and diverse plant communities. North and South Beaver Creeks contain genetically pure Yellowstone cutthroat trout.

Manageability med

The boundaries are manageable. Bureau of Land Management and private lands are located along the west boundary and provide several access points into the area. There are off-trail snowmobile play areas in the winter. The interior is relatively inaccessible.

Conclusion: The high opportunities for solitude, the manageability, and the large size of the area combine to make the area **Capable** for wilderness. It will be further evaluated for availability and need.

Availability Determination

- | | |
|---|----|
| 1. Is the area vitally needed for increased water protection and storage? | No |
| 2. Would wilderness designation seriously restrict important wildlife management? | No |
| 3. Does the area have high strategic or economic mineral development potential? | No |
| 4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? | No |
| 5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? | No |

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6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? No

Conclusion: Based on the resource potentials and management considerations described above, this area has been determined to be **Available** for wilderness.

Need Determination

Nearby Wilderness: The roadless area lies approximately 18 miles from the Cloud Peak Wilderness. An additional 4 million acres of wilderness occurs in the state of Wyoming.

Wildlife Needs: The area harbors genetically pure Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*), a Forest sensitive species, in North and South Beaver Creeks. No species have been identified in the Pete's Hole area that require a wilderness environment for survival.

Cover Type and Landform: In comparison of the occurrence of various ecosystem types in nearby wilderness areas, the alpine and subalpine ecosystem types are well represented. Pete's Hole Roadless Area consists of sedimentary breaklands and mountain slopes with lower elevation ecosystems including Douglas fir, sagebrush, and mountain shrub communities. These communities are uncommon in Wyoming wilderness areas.

The following table displays percentage of the cover types represented in this roadless area.

Table C-55. Percent of cover types in the Pete's Hole Roadless Area.

Cover Type	Acres	Percent
Forb	1,802	9
Grass	988	5
Rock	740	4
Shrub	780	4
Sagebrush	2,696	13
Willow	166	1
Aspen	129	1
Cottonwood/willow	20	-
Douglas fir	7,927	39
Limber pine	96	-
Lodgepole pine	722	4
Ponderosa pine	-	-
Pinyon-juniper	505	2
Spruce-fir	3,731	18

Limited Representation Cover Types: Certain cover types identified above have limited representation in the Rocky Mountain Region wilderness system. The following table identifies those limited cover types in the Pete's Hole Roadless Area and shows the percentage of total capable/available roadless it represents on the Bighorn National Forest.

Table C-56. Limited representation cover types in the Pete's Hole Roadless Area.

Cover Type	Acres in Pete's Hole Roadless Area	Percent of Total Bighorn NF Capable/Available Roadless
Ponderosa pine	-	-
Douglas fir	7,927	39
Lodgepole pine	722	4
Big sagebrush	2,696	13
Pinyon-juniper	505	2
Aspen	129	1
Grass	988	5
Limber pine	96	-
Cottonwood/willow	20	17

Public Comment: None

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Pete's Hole roadless area (20,302 acres).

Table C-57. Management prescriptions by alternative for the Pete's Hole Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.33			17,985			
3.31		15,756	1,551			
3.5	6,421					
4.2		2,471	460	1,273	1,273	
5.11	1,882					2,394
5.12	9,126			17,912	15,881	14,480
5.13						
5.41	2,873	2,075	306	1,117	3,148	2,470
5.5						958

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The following table summarizes the Pete's Hole roadless area acreage by alternative for the groups shown above.

Table C-58. Estimated acres retaining and not retaining roadless character for the Pete's Hole Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D- DEIS	Alt D- FEIS	Alt E
Acres Retaining Roadless Character	18,227	18,128	20,040	18,200	18,302	18,060
Acres Not Retaining Roadless Character	2,075	2,174	262	2,102	2,000	2,242

Roadless Area B048 – Cloud Peak Contiguous South

Acres	22,068
Ranger District	Powder River
History	Originally part of the #02031 Cloud Peak Contiguous Roadless Area (151,410 acres) as identified in RARE II analysis.
Location	Adjacent to the south end of the Cloud Peak Wilderness in Big Horn and Johnson Counties, WY. Motorized access to the area is available through USH 16, the West Tensleep Rd (FR 27), Lake Creek Rd (FR 431), Baby Wagon Rd (FR 419), and the Upper North Fork Rd (FR 447). Numerous trails access the Cloud Peak Wilderness from this roadless area: Misty Moon Trail (FT 063), Roy Loudan Trail (FT 065), and Virginia Creek Trail (FT 098).
Surroundings	Contiguous to the south end of the Cloud Peak Wilderness. The boundaries are USH 16 (Cloud Peak Skyway) and Meadowlark Lake to the south, Bald Ridge and West Tensleep Lake to the west, and Sheep Mountain to the east. The Cloud Peak Wilderness forms the north boundary.
Physical and biological description	<p>The area is characterized by subalpine forests bordered by the granitic mountain peaks of the Cloud Peak Wilderness. Elevations range from 8,600 feet near Bear Lake to 11,722 feet atop Loaf Mountain. Vegetation is predominantly forested, with a mixture of lodgepole pine, Engelmann spruce, and subalpine fir, and an understory of grouse whortleberry. Parks and large meadows occur throughout the region, featuring Idaho fescue, big sagebrush, silky lupine, tufted hairgrass, and alpine timothy. In flood plains and alluvial depressions, willows and rushes are present in the wetter areas. The area straddles the Big Horn Mountain divide, with the majority of the streams draining into the Nowood River via Tensleep Creek, while the watershed along the east boundary of the unit drains into the Powder River.</p> <p>Near Loaf Mountain, at an elevation approaching 12,000 feet, glacial cirque lands of periglacial rubble and talus distinguish the harsh environment. Alpine plant communities (Geum turf, hairgrass meadow, and sedge bog) are found above timberline that can withstand the short growing season and cold climate. Surface boulders are common on glacial soils at higher elevations.</p>
Features	Views of the granite peaks in the Cloud Peak Wilderness are important visual features in the area. Cool, subalpine forests of lodgepole pine, Engelmann spruce, and subalpine fir are found on mountain slopes and ridges, with a variety of marshes, lakes and glacial moraines in riparian zones. Quaternary glacial deposits of sand, gravel moraines, and boulders are some of the unique geological features of the area.

Resource Uses

Vegetation Vegetation composition, structure, and function are within the historic range of variability. Vegetation is comprised of 35% spruce-fir, 33% lodgepole pine, 17% grass/forb, and the remainder is non-vegetated. Large lodgepole pine old-growth, in the spruce/fir habitat type, is found in the vicinity of West Tensleep Lake, where mature pines, large snags and multiple canopies form late successional habitat. The alpine wetlands and granite talus fields support diverse willow, forb, and graminoid communities. The roadless area contains part of the Virginia Creek and Powder River Pass-Hazelton Peaks “Biological Areas” - areas identified by the WYNDD for important concentrations of rare taxa and their representative vegetation communities. The two biological areas are ranked by WYNDD as B3: high significance areas. Lake McLain is a potential Research Natural Area that overlaps the Virginia Creek Biological Area.

Recreation The majority of recreational use involves hiking, horseback riding, fishing, hunting, cross country skiing, snowshoeing, and snowmobiling activities. Numerous trails are scattered throughout the area, many of which access the Cloud Peak Wilderness. The most popular trailhead on the Forest is West Tensleep – a major embarkment spot for wilderness destinations such as Lake Helen, Misty Moon Lake, and Cloud Peak. The Mirror Lake and Lost Twin Lakes Trail (FT 065) also departs from the West Tensleep trailhead, which features a large parking area, facilities for horse users, and a developed campground adjacent to the trailhead. Another popular recreation site is East Tensleep Lake, accessed by a road originating from Sitting Bull Campground. The motorized status of the Highline Trail (FT 067) is under review. The other designated trails are closed to motorized use, except for snowmobile. These trails access the Cloud Peak Wilderness, and there are occasional violations that occur during the winter months, with snowmobile trespass into the wilderness. Anglers frequent West, Middle and East Tensleep Creeks, and East Tensleep Lake for cutthroat, brook, brown, and rainbow trout.

Snowmobiling is popular along groomed trails along the interior and perimeter of the area. The West Tensleep Road and trails north of Meadowlark Lake receive very heavy use during winter months, where travel to and from area lodges (Deer Haven and Meadowlark) constitute popular travel routes. State system snowmobile trails “H” and “N” traverse through the east half of the roadless area and are popular for snowmobilers seeking trail rides and off-trail play areas. There are no groomed cross country ski trails within the roadless area, but backcountry skiers utilize the Baby Wagon drainage and access the Cloud Peak Wilderness via the Misty Moon Trail (FT 063). There is moderate big game hunting pressure in the area, particularly near roads. Outfitter-guide permits are authorized for fall hunting and summer horseback rides. There are numerous developed recreation sites including lodges, a downhill ski area, a cross country ski area, recreation residences, campgrounds, and picnic areas outside the roadless area along US Highway 16 and the West Tensleep Road (FR 27). Approximately 70% of the area is rated for ROS as Semi-primitive Non-motorized, 20% Semi-primitive as Motorized, and 10% as Roded Natural.

Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, pikas, beaver, ground squirrels, and grouse also inhabit the area. The area provides summer habitat for deer and elk. A number of streams support fishable populations of brook, brown, and rainbow trout. The pine marten (<i>Martes americana</i>), a Forest sensitive species, has been observed in the West Tensleep Lake area. Another Forest sensitive species, the Northern goshawk, (<i>Accipiter gentilis</i>), has been documented south of East Tensleep Lake.
Range	There are several active sheep/goat allotments in the area - most of the grazing is concentrated in the east half of the area. There is a stock driveway/trail from Upper Meadows into the Baby Wagon drainage.
Water	Principal features in the area are East Tensleep Lake, Virginia Creek, Babywagon Creek, Lake Creek, and the East, West, and Middle Forks of Tensleep Creek. The area is drained into the East Tensleep Creek, North Fork Crazy Woman, and Piney Creek watersheds.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.
Heritage resources	There are ceremonial sites and a prehistoric/historic travel route adjacent to the unit. The presence of a heritage travel corridor near the boundary of the roadless area indicates high potential for other eligible heritage resources in the area.
Fire	The Meadowlark Burn consumed 1,800 acres in 1975, outside the area boundary north of Meadowlark Lake. Fires in the lodgepole pine and Engelmann spruce habitat types typically experience a high-intensity burn regime that results in stand replacement.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude med

Solitude opportunities are rated high in the east half of the area in summer, while the west half receives an increased volume of use concentrated along trails. Concentrated use on snowmobile trails and snowplay occurs across the area. The Cloud Peak Wilderness borders the north side of the area.

Natural and free from disturbance med

The area possesses a high degree of naturalness. Use of roads along area boundaries and snowmobile trails located within the east half of the area causes disturbance.

Challenge med

The area offers a moderate degree of challenge.

Primitive and unconfined recreation high

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Environmental and special features high

This area offers a high level of opportunity for outdoor education and environmental study. There are opportunities to study subalpine and alpine ecosystems, glacier-affected land forms, and rare plants in the Virginia Creek and Powder River Pass-Hazelton Peaks Biological Areas. This roadless area contains the potential Lake McLain Research Natural Area. The scenic features are rated high, with glacial streams, high elevations wetlands, and views of the granite peaks of the Cloud Peak Wilderness.

Manageability low

Manageability of the area is considered low. A narrow neck is formed near East Tensleep Lake to exclude a road and ATV trail originating from Sitting Bull Campground. Portions of the south boundary are along US Highway 16. This roadless area wraps around the south end of the Cloud Peak Wilderness. The area occupies the transition zone between the roaded and developed part of the Forest and the Cloud Peak Wilderness.

Conclusion: The area's low level of manageability, the disturbance from motorized trails, the sights and sounds of nearby roads and detracts from the solitude and natural feel of the area. It has been determined to be **Not Capable** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Cloud Peak Contiguous South roadless area (22,068 acres).

Table C-59. Management prescriptions by alternative for the Cloud Peak Contiguous South Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.32	5,496	7,968	8,002	6,902	15,320	4,515
1.33		4,134	4,132			118
2.2		2,980	2,980	2,980		
3.31		2,480	2,518	38	1,612	
3.5	6,645					
4.2	534	2,306	2,306	2,241	1,778	
4.3				5,296	531	
5.11	738	498	2,130	2,980		8,318
5.12	5,052	38			1,136	
5.13	3,603	1,664		1,631	1,468	6,811
5.5					223	2,306

The following table summarizes the Cloud Peak Contiguous South roadless area acreage by alternative for the groups shown above.

Table C-60. Estimated acres retaining and not retaining roadless character for the Cloud Peak Contiguous South Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D- DEIS	Alt D- FEIS	Alt E
Acres Retaining Roadless Character	19,563	20,756	20,929	20,001	20,899	17,900
Acres Not Retaining Roadless Character	2,505	1,312	1,139	2,067	1,169	4,168

Roadless Area B052 – Adelaide (contiguous)

Acres	2,023
Ranger District	Medicine Wheel/Paintrock
History	Originally part of the #02031 Cloud Peak Contiguous Roadless Area (151,410 acres) as identified in RARE II analysis.
Location	The area is located adjacent to the Cloud Peak Wilderness in Big Horn County, Wyoming. Motorized access is provided by the Paintrock Road (FR 17), the Shell Reservoir Road (FR 271), and the Lake Arden Road (FR 270).
Surroundings	The Cloud Peak Wilderness forms the north boundary. Roads and topographic features delineate the remainder.
Physical and biological description	Area elevations range from 8,800 feet to 9,605 feet. The area is characterized by subalpine forests bordered by the granitic mountain peaks of the Cloud Peak Wilderness. Vegetation is predominantly forested, with a mixture of lodgepole pine, Engelmann spruce and subalpine fir stands, and an understory of grouse whortleberry. Small parks featuring Idaho fescue, big sagebrush, silky lupine, tufted hairgrass, and alpine timothy are scattered throughout. Along flood plains and alluvial depressions, willows and rushes are present.
Features	Views of the granite peaks in the Cloud Peak Wilderness and surrounding lakes are the key visual features in the area. Cool, subalpine forests of lodgepole pine, Engelmann spruce, subalpine fir, and grouse whortleberry complement the area.
Resource Uses	
Vegetation	Vegetation is in a natural condition and is comprised of 34% spruce-fir, 27% lodgepole pine, 18% grass/forb, and 19% sagebrush.
Recreation	The majority of recreational use involves hiking, camping, horseback riding, fishing, and hunting activities. The Shell Reservoir and Adelaide Lake area is heavily used during the peak summer period for camping and fishing destinations by both motorized and non-motorized visitors. Two trails access the Cloud Peak Wilderness – the Mail Creek Trail (FT 817) and the Shell Creek Trail (FT 57). There is light to moderate big game hunting pressure in the area, particularly near roads. Snowmobiling is popular along groomed trails that skirt the outer perimeter of the unit. There are two outfitter-guide camps in the area. The ROS features a majority of Semi-primitive Motorized recreation. This is a transition area between the roaded Forest and the Cloud Peak Wilderness.
Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, pikas, beaver, ground squirrels, and grouse also inhabit the area. The area includes summer habitat for deer, elk and moose. Shell Reservoir and Lake Adelaide are popular fishing destinations, accessed by FR 271.

	The roadless area is contained within the South Tongue/Shell lynx analysis unit. The Canada lynx (<i>Lynx canadensis</i>) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act, however, the presence of lynx has not been documented on the Forest.
Range	There is an active grazing allotment within the area.
Water	Adelaide Creek, Shell Creek and Lake Arden are the primary drainage features here – part of the Upper Shell Creek watershed.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.
Heritage resources	No known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	There is no recorded fire history for the area. Fires in the lodgepole pine and Engelmann spruce habitat types typically experience a high-intensity burn regime that results in stand replacement. Fires in the grass/sagebrush areas typically experience fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of plants.
Other	The Cloud Peak Wilderness is contiguous with the north boundary.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude med

Opportunities for solitude are limited due to fishing on lakeshores.

Natural and free from disturbance med

The area possesses a moderate degree of naturalness. Use of roads and snowmobile trails near the area boundary causes disturbance.
Outfitter/guide camps and facilities at lakes detract from natural setting.

Challenge med

Offers a moderate degree of challenge due to modest change in elevation.

Primitive and unconfined recreation med

The primary activities are fishing, camping, and hiking.

Environmental and special features med

Views of area lakes, subalpine forests, and peaks in the Cloud Peak Wilderness are the main features.

Manageability med

The Cloud Peak Wilderness is adjacent to the area's north boundary. Elsewhere, roads with dispersed recreation present a challenge to manageability. The area occupies the transition zone between roaded Forest and wilderness.

Conclusion: The area has good opportunities for primitive recreation. It will be considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports. Yes
Motorized recreation in the area.
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? No

Conclusion: Based on motorized travel and disturbance from area roads, this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Adelaide (contiguous) roadless area (2,023 acres).

Table C-61. Management prescriptions by alternative for the Adelaide Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
3.31	1,966	2,023	2,023	1,966	2,023	1,025
5.11				57		54
5.12	57					
5.13						944

The following table summarizes the Adelaide roadless area acreage by alternative for the groups shown above.

Table C-62. Estimated acres retaining and not retaining roadless character for the Adelaide Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	1,821	1,821	1,821	1,815	1,821	1,626
Acres Not Retaining Roadless Character	202	202	202	208	202	397

Roadless Area B053 – Mud Lake (contiguous)

Acres	112
Ranger District	Medicine Wheel/Paintrock
History	This area was originally part of the #02031 Cloud Peak Contiguous Roadless Area (151,410 acres) as identified in RARE II analysis.
Location	The area is located adjacent to the Cloud Peak Wilderness in Big Horn County, Wyoming. Motorized access is provided by the Shell Reservoir Road (FR 271) and the Lake Arden Road (FR 270).
Surroundings	The Cloud Peak Wilderness forms the east boundary. The Lake Arden Road surrounds the remainder.
Physical and biological description	The area is characterized by subalpine forests bordered by the granitic mountain peaks of the Cloud Peak Wilderness. Vegetation is predominantly forested, with lodgepole pine stands and an understory of grouse whortleberry. Above timberline, the alpine plant community thrives in the cold harsh climate and short growing season.
Features	Views of the granite peaks in the Cloud Peak Wilderness and surrounding lakes are the key visual features in the area. Cool, subalpine forests of lodgepole pine, Engelmann spruce, subalpine fir, and grouse whortleberry complement the area.
Resource Uses	
Vegetation	Vegetation is in a natural condition and is comprised of 65% lodgepole pine and 35% grass/forb.
Recreation	The majority of recreational use involves hiking, horseback riding, fishing, and hunting activities. The Shell Reservoir and Adelaide Lake area is heavily used during the peak summer period for camping and fishing destinations by both motorized and non-motorized visitors. The Shell Lakes High Trail (FT 828) originates from FR 271 and leads to Shell Lakes in the Cloud Peak Wilderness. There is moderate big game hunting pressure in the area, particularly near roads. The area's ROS classification is Semi-primitive Motorized recreation.
Wildlife	<p>Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. The area is also inhabited by small animals and birds including marmots, pikas, beaver, ground squirrels, and grouse. The area includes summer habitat for deer, elk and moose. Shell Reservoir and Lake Adelaide are popular fishing destinations, accessed by FR 271.</p> <p>Mud Lake is contained within the South Tongue/Shell lynx analysis unit. The Canada lynx (<i>Lynx canadensis</i>) is listed as Threatened by the US Fish and Wildlife Service under the Endangered Species Act; however, the presence of</p>

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	lynx has not been documented on the Forest.
Range	The area is within an active grazing allotment.
Water	Buckley Creek is the primary drainage features here – part of the Upper Shell Creek watershed.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	There are no wildfires on record for this area. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement. Fires in the grass/sagebrush areas typically experience fires that spread quickly and burn vegetation, but do not harm the root system and stimulate regeneration of plants.
Other	The Cloud Peak Wilderness is contiguous with the east boundary of Mud Lake.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude.....	low
Opportunities for solitude are limited due to the motorized access that surrounds the boundary.	
Natural and free from disturbance	med
The area possesses a moderate degree of naturalness. Use of roads near the area boundary causes disturbance.	
Challenge	low
Roads lead directly to the boundary and there is little elevation change.	
Primitive and unconfined recreation.....	med
Recreation activities occur primarily outside the roadless area in the reservoir and lake area.	
Environmental and special features	med
Views of area lakes, subalpine forests, and peaks in the Cloud Peak Wilderess are the main features.	
Manageability	med
Manageability of the area is considered good, with one half of the boundary defined by the wilderness and the remainder by a road. The area is a transition zone between the roaded and developed Forest and the Cloud Peak Wilderness.	

Conclusion: This small area lacks any significant qualities or features for wilderness consideration. It will be considered **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

1. Is the area vitally needed for increased water protection and storage? No
2. Would wilderness designation seriously restrict important wildlife management? No
3. Does the area have high strategic or economic mineral development potential? No
4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? No
5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports? No

A heavy concentration of motorized travel and dispersed recreation exists in the area.

6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? No

Conclusion: Based on motorized travel and disturbance from area roads, this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Mud Lake (contiguous) roadless area (112 acres).

Table C-63. Management prescriptions by alternative for the Mud Lake Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
3.31	112	112	112	112	112	112

The following table summarizes by alternative the Mud Lake roadless area acres retaining and not retaining roadless character.

Table C-64. Estimated acres retaining and not retaining roadless character for the Mud Lake Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	101	101	101	101	101	101
Acres Not Retaining Roadless Character	11	11	11	11	11	11

Roadless Area B054 – Cloud Peak Contiguous East (fragments)

Acres	383
Ranger District	Powder River
History	This area was originally part of the #02031 Cloud Peak Contiguous Roadless Area (151,410 acres) as identified in RARE II analysis.
Location	The area is located adjacent to the Cloud Peak Wilderness in Johnson County, Wyoming. Motorized access is provided by the Sourdough Creek Road (FR 23) and Trigger Lake Road (FR 382).
Surroundings	The Cloud Peak Wilderness forms the west boundary. Topographic features delineate the remainder.
Physical and biological description	The area is a narrow hillside less than ½ mile wide between roads and the Cloud Peak Wilderness. The area is characterized by subalpine forests bordered by the granitic mountain peaks of the Cloud Peak Wilderness. Vegetation is predominantly forested, with lodgepole pine stands and an understory of grouse whortleberry.
Features	The area features a lodgepole pine hillside adjacent to the Cloud Peak Wilderness.

Resource Uses

Vegetation	Vegetation is comprised of 100% lodgepole pine. The timbered slopes southeast of the roadless area has been heavily harvested on a continual basis since the Tie Hack era (1900).
Recreation	The recreational use involves hiking and fishing. Visitors access the area along one of several Forest Roads, often passing through to use the lakes in the Cloud Peak Wilderness. One trail originates from the north boundary: the Sherd Lake Loop Trail (FT 046) that also leads to the wilderness. Snowmobiling is popular along groomed trails that skirt the outer perimeter of the unit. The ROS features both Semi-Primitive Motorized and Roaded Modified
Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. The area is also inhabited by small animals and birds including marmots, pikas, beaver, ground squirrels, and grouse. The area includes summer habitat for deer, elk and moose.
Water	The area is contained within the Piney Creek watershed.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.

Fire	Approximately 10,000 acres burned in this region during the Duck Creek Fire of 1943. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement.
Other	The Cloud Peak Wilderness is contiguous with the west boundary of this roadless area.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude med

Opportunities for solitude are limited due to the motorized access that surrounds the east boundary.

Natural and free from disturbance med

The area possesses a moderate degree of naturalness. Timber in the local vicinity has been logged repeatedly beginning with the Tie Hack era. Use of roads and snowmobile trails near the area boundary causes disturbance.

Challenge med

The area offers a moderate degree of challenge due to modest change in elevation.

Primitive and unconfined recreation low

The recreation opportunities are in the adjacent wilderness.

Environmental and special features low

The area has an east aspect that faces old harvest units on surrounding mountain slopes.

Manageability med

This area represents the transition ground between the roaded and developed part of the Forest and the Cloud Peak Wilderness.

Conclusion: The area consists lodgepole pine mountainside adjacent to the wilderness without prominent wilderness qualities or recreation opportunities. It will be considered **Capable** for wilderness only because it is contiguous with existing wilderness.

Availability Determination

- | | |
|---|----|
| 1. Is the area vitally needed for increased water protection and storage? | No |
| 2. Would wilderness designation seriously restrict important wildlife management? | No |
| 3. Does the area have high strategic or economic mineral development potential? | No |
| 4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? | No |

ROADLESS AREA MANAGEMENT

5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports. Yes
Motorized use surrounding the east boundary.
6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? No

Conclusion: Based on motorized travel and disturbance from area roads, this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Cloud Peak Contiguous East fragment B054 (contiguous) roadless area (383 acres).

Table C-65. Management prescriptions by alternative for the Cloud Peak Contiguous East Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
3.5	48					
5.11	47		383			41
5.12	17					
5.13	271	383		383		342
5.5					383	

The following table summarizes by alternative the Cloud Peak Contiguous East roadless area acres retaining and not retaining roadless character.

Table C-66. Estimated acres retaining and not retaining roadless character for the Cloud Peak Contiguous East (B054) Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	286	268	306	268	306	272
Acres Not Retaining Roadless Character	97	115	77	115	77	111

Roadless Area B056 – Cloud Peak Contiguous East (fragments)

Acres	2,668
Ranger District	Powder River
History	This area was originally part of the #02031 Cloud Peak Contiguous Roadless Area (151,410 acres) as identified in RARE II analysis.
Location	The area is located adjacent to the Cloud Peak Wilderness in Johnson County, Wyoming. Motorized access is provided by the Schoolhouse Park Road (FR 391), the Hunter Creek Road (FR 19), the Soldier Park Road (FR 394), and the Buffalo Park Cutoff Road (FR 398).
Surroundings	The Cloud Peak Wilderness forms the west boundary. Forest roads and topographic features delineate the remainder.
Physical and biological description	The area is characterized by subalpine forests bordered by the granitic mountain peaks of the Cloud Peak Wilderness. Vegetation is predominantly forested, with lodgepole pine stands and an understory of grouse whortleberry on granite substrate. There are scattered parks and meadows in the area that feature Idaho fescue and silky lupine as the dominant plant community. Some nice aspen groves are found along the edge of meadows. Stones and boulders are common on the ground surface, as are rock outcroppings – large barren exposures of granite or gneiss.
Features	The area is a hilly region of typical lodgepole pine forests on granite substrate. Some nice open meadows and snowmelt streams add variety to the landscape. The northeast corner is located in a glacial moraine – pothole region.
Resource Uses	
Vegetation	Vegetation is in a natural condition and is comprised of 48% lodgepole pine, 28% grass, 4% aspen, and the remainder is rock.
Recreation	The area receives heavy recreational use in the form of hiking, fishing, camping, horseback riding, photography, and hunting. Visitors can access the area via several Forest Roads, then embark on hiking trails to destinations in the Cloud Peak Wilderness. The Seven Brothers Trail (FT 45) is a very popular route for backpackers and fishermen who like to experience the high elevation lakes in the wilderness. Other trails in the area include the Buffalo Park Cutoff (FT 136), the Parmelee Trail (FT 158), and the Summer Home Trail (FT 154). Horseback riding (and packing) is a popular activity on trails. The area receives moderate to heavy big game hunting pressure. Soldier Park is a popular location for hunting camps. The ROS features a majority of Semi-Primitive Motorized and Roaded Natural recreation.

ROADLESS AREA MANAGEMENT

Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, pikas, beaver, ground squirrels, and grouse also inhabit the area. The area includes summer habitat for deer, elk and moose, with winter range extending along the east boundary of the area.
Range	There are active grazing allotments with fences and other range improvements in and adjacent to the area.
Water	North Clear and Seven Brothers Creeks flow through the area and drain into the Piney Creek watershed.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	The Lost Fire burned approximately 12,000 acres in this vicinity in 1988. Much of the regeneration is at the seedling/sapling stage. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement.
Other	The Cloud Peak Wilderness is contiguous with the west boundary of this roadless area.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude.....	med
Opportunities for solitude are limited due to the motorized access that surrounds the boundary.	
Natural and free from disturbance	med
The area possesses a moderate degree of naturalness. Use of roads near the area boundaries causes disturbance.	
Challenge	low
Primitive and unconfined recreation.....	high
Environmental and special features	med
The area offers lodgepole forests, meadows, and views into the Cloud Peak Wilderness.	

Manageability low

The Cloud Peak Wilderness is contiguous with the west boundary of the roadless area. Elsewhere, an irregular boundary surrounded by roads presents a management challenge. The ratio of boundary miles to area acres is high. The Buffalo Park Cutoff Road (FR 398) into Webber Park extends into the core of the area. This area occupies the transition zone between roaded and developed areas of the Forest and the wilderness.

Conclusion: The area has good opportunities for primitive recreation. It will be considered marginally **Capable** for wilderness and will be further evaluated for availability and need.

Availability Determination

- | | |
|---|-----|
| 1. Is the area vitally needed for increased water protection and storage? | No |
| 2. Would wilderness designation seriously restrict important wildlife management? | No |
| 3. Does the area have high strategic or economic mineral development potential? | No |
| 4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? | No |
| 5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports. | Yes |
| There is a high volume of motorized use on roads and dispersed recreation surrounding the area and into the interior. | |
| 6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? | No |

Conclusion: Based on motorized travel and disturbance from area roads, this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Cloud Peak Contiguous East fragment B056 roadless area (2,668 acres).

Table C-67. Management prescriptions by alternative for the Cloud Peak Contiguous East Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
1.32	627					434
3.31	1,146		2,304	1,870		99
3.5	359					
4.2		28	28	28	28	
4.3		2,640	336		163	
5.11	355					166
5.12	181			770	2,477	
5.13						1,969

The following table summarizes by alternative the Cloud Peak Contiguous East (B056) roadless area acres retaining and not retaining roadless character.

Table C-68. Estimated acres retaining and not retaining roadless character for the Cloud Peak Contiguous East Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	2,428	2,398	2,398	2,398	2,398	2,034
Acres Not Retaining Roadless Character	240	270	270	270	270	634

Roadless Area B057 – Cloud Peak Contiguous East (fragments)

Acres	3,274
Ranger District	Powder River
History	This area was originally part of the #02031 Cloud Peak Contiguous Roadless Area (151,410 acres) as identified in RARE II analysis.
Location	The area is located adjacent to the Cloud Peak Wilderness in Johnson County, Wyoming. Motorized access is provided by the Schoolhouse Park Road (FR 391), the Circle Park Road (FR 20), and the South Clear Creek Road (FR 375).
Surroundings	The Cloud Peak Wilderness forms the west boundary. Forest roads and topographic features delineate the remainder.
Physical and biological description	The area is characterized by subalpine forests bordered by the granitic mountain peaks of the Cloud Peak Wilderness. Vegetation is predominantly forested, with lodgepole pine stands and an understory of grouse whortleberry. There are scattered parks and meadows in the area that feature Idaho fescue and sedes as the dominant plant community. Some nice aspen groves are found along the edge of meadows. Stones and boulders are common on the ground surface, as are rock outcroppings – large barren exposures of granite or gneiss. Willows and rushes are present along riparian zones.
Features	The area features a series of lodgepole pine mountainsides, hills and ridges drained by snowmelt streams.
Resource Uses	
Vegetation	Vegetation is in a natural condition and is comprised of 84% lodgepole pine, 9% grass, 3% aspen, 2% willow, and 2% spruce-fir. Parts of the area have been previously logged.
Recreation	The area receives heavy recreational use in the form of hiking, fishing, camping, horseback riding, photography, ATV riding, and hunting. There are several developed recreation sites that receive heavy use located along area boundaries including Circle Park, Middle Fork, and South Fork Campgrounds. Dispersed camping and recreation is also popular along the many Forest roads that delineate the boundary. Hikers and backpackers depart from the Circle Park Trailhead for destinations in the Cloud Peak Wilderness such as Sherd Lake, Lake Angeline, and the South Fork Ponds area. Several trails connect the Schoolhouse Park area with Circle Park. A groomed snowmobile trail (“K”) traverses through the area. The area receives moderate big game hunting pressure in the fall. The ROS is entirely Semi-Primitive Motorized recreation.

ROADLESS AREA MANAGEMENT

Wildlife	Large wildlife species found in the area include elk, mule deer, black bear, moose, and mountain lion. Small animals and birds including marmots, pikas, beaver, ground squirrels, and grouse also inhabit the area. The area includes summer habitat for deer, elk and moose, with elk winter range and parturition areas extending along the east boundary of the area.
Range	There are active grazing allotments with fences and other range improvements in and adjacent to the area.
Water	Middle Clear Creek, South Clear Creek, and Circle Park Creek drain the area into the Piney Creek watershed.
Minerals	There are no active mineral claims or withdrawals, and the area is considered to have no mineral/oil/gas potential.
Heritage resources	There are no known heritage resources in the area. There is potential for both historic and prehistoric sites in this area.
Fire	The Lost Fire consumed approximately 12,000 acres in this vicinity in 1988. Regeneration from the Lost fire is primarily at the seedling/sapling stage. The Duck Creek Fire also burned some of the area in 1943. Fires in the lodgepole pine habitat type typically experience a high-intensity burn regime that results in stand replacement.
Other	The Cloud Peak Wilderness is contiguous with the west boundary of this roadless area. Recreation residences are located along area boundaries.

Capability Assessment

(All ratings are high, medium, low, or n/a – not applicable)

Primary Elements

Opportunity for solitude.....	low
Opportunities for solitude are limited due to the motorized accessibility and the related high levels of dispersed recreation.	
Natural and free from disturbance	med
The area possesses a moderate degree of naturalness. Use of roads the causes disturbance.	
Challenge	low
Primitive and unconfined recreation.....	low
Motorized recreation and dispersed recreation are too concentrated to allow for much primitive and unconfined recreation.	
Environmental and special features	med
The area offers lodgepole forests, meadows, and views into the Cloud Peak Wilderness.	

Manageability med

The Cloud Peak Wilderness is contiguous with the west boundary of the roadless area. Elsewhere, an irregular boundary surrounded by roads and developed recreation sites presents a management challenge. Recreation residences and campgrounds extend along roads into the interior. There is a high ratio of boundary miles to area acres. This area occupies the transition zone between roaded and developed parts of the Forest and the Cloud Peak Wilderness.

Conclusion: The area is very limited in opportunities for solitude and isolation due to its surrounding roaded character and concentration of developed and dispersed recreation. It will be considered marginally **Capable** for wilderness based on its contiguous status with the existing wilderness.

Availability Determination

- | | |
|--|-----|
| 1. Is the area vitally needed for increased water protection and storage? | No |
| 2. Would wilderness designation seriously restrict important wildlife management? | No |
| 3. Does the area have high strategic or economic mineral development potential? | No |
| 4. Are there unique or outstanding natural phenomena that require public access and development that would be inconsistent with wilderness designation? | No |
| 5. Is the land needed to meet clearly documented resource demands such as timber, minerals, or developed recreation sites, including winter sports. | Yes |
| The area is surrounding by roads, developed recreation sites, resorts, and outfitter-guides. There is a high volume of motorized use in the area with accompanying dispersed recreation. | |
| 6. Are there existing contractual or other significant obligations on the area not in consort with wilderness designation? | No |

Conclusion: Based on motorized travel and disturbance from area roads, this area has been determined to be **Not Available** for wilderness.

Environmental Consequences

The following table shows the management prescription allocations by alternative for the Cloud Peak Contiguous East fragment B057 roadless area (3,274 acres).

Table C-69. Management prescriptions by alternative for the Cloud Peak Contiguous East Roadless Area.

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
3.31			515			
3.5	8					
4.2	33	453	453	453	236	
4.3		2,244	1,729			
5.11	182		577			10
5.12	879			385	122	
5.13	2,172	577		2,436		2,811
5.5					2,916	453

The following table summarizes by alternative the Cloud Peak Contiguous East (B057) roadless area acres retaining and not retaining roadless character.

Table C-70. Estimated acres retaining and not retaining roadless character for the Cloud Peak Contiguous Roadless Area (for the year 2020).

Mgmt Rx	Alt A	Alt B	Alt C	Alt D-DEIS	Alt D-FEIS	Alt E
Acres Retaining Roadless Character	2,491	2,786	2,844	2,414	2,631	2,338
Acres Not Retaining Roadless Character	783	488	430	860	643	936